









THE  
NEW-YORK  
DENTAL RECORDER,

DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL AND MECHANICAL DENTISTRY.

EDITED BY

C. C. ALLEN, M. D., DENTIST.

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VOLUME III.

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*Gar's sample*

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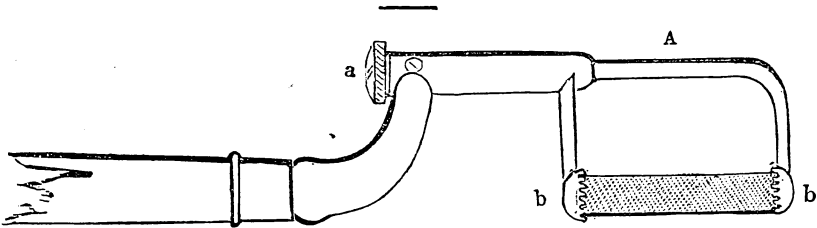
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## LETTER FROM DR. G. E. HAWES.

DR. C. C. ALLEN,

Dear Sir,—In compliance with the request of the N. Y. S. Society of Dentists, it was my intention to have given you for the present number of your Journal, an illustration of the manner in which the regulation of the teeth of the lad who was present at the late meeting on the —, was affected; but owing to an error of the engraver, I am compelled to defer it until some future number.

If you should consider the following notices serviceable to the profession, you may give them a place in the Recorder.



This cut is intended to represent an instrument invented by J. D. Chevalier, manufacturer of Dental Instruments, for filing the teeth.

It is the best adapted to that purpose of any which have come under my observation. The thumb-screw (*a*) opens and closes the anterior part of the frame, so that the jaws may be made to accommodate the necessary length of file, which is firmly secured at any desired angle in the grooves, (*b. b.*)

This instrument is used in filing the front teeth, with great advantage to the operator; as the frame and handle place the file more completely under his control, and enable him to perform the operation in a better manner, with a saving of time to himself and of pain to his patient.

When separating the molar teeth, an offset of usual form admits the cheek, the file and handle being on a line.

The instrument can be used for the right or left inferior or superior

molars with equal advantage, and obviates entirely the necessity of protecting the cheek or tongue from being wounded by the round and polished surface of the jaws of the frame.



Dr. William W. Riley, of Columbus, Ohio, recommends very highly a coiled spring invented by him in 1845.

Its construction is delineated in the above cut, which he furnished for the use of the Dental Recorder. He says the spring can be made of any required size, and when applied to a set of teeth, their strength may be increased or diminished at pleasure by bending the arms backward or forward without injury. By the same means, also, whole sets of teeth may be correctly balanced to prevent sliding out of place.

The advantages which he considers this spring to possess over others in general use, are the prevention of friction, as they may be bent so as not to come in contact with the teeth. Being short, they are the more easily cleansed, and they require but about half the usual quantity of gold.

G. E. HAWES.

It is proper to remark that the first file carrier in which the files were confined and held in by their extremities passing into grooves or mortices, was invented by Dr. Westcott, a description of which, accompanied by a cut, was published in the American Journal for March, 1847. Dr. Westcott's file carrier differed from the above in having the bar *a.* a spring which yielded sufficiently to admit the ends of the file into two square mortices in the buttons, (*b. b.*) The principal objects sought by the inventor, were to hold the file by its extremities, so that files of any desired shape might be used, and to divest the instrument of all joints, screws, or moveable fixtures, so that the instrument might readily be kept clean and free from rust. Both these objects were effected; but it was necessary to have the files all of the same length, as the spring allowed very little motion to the points which held the file. In order to allow greater freedom of motion to these points, Dr. Elliott, of Montreal, modified the instrument by making a spring of the extreme arm which supports the file, and making it longer by carrying it above the bar *a.* in the form of a bow.

This could hardly be called an improvement, as the bow was so much in the way as to prevent the instrument from being used except for separating the back teeth, when the bow part of the frame lay flat over the tongue. Dr. Elliott's instrument also had the buttons, (*b. b.*)

with grooves to place the file on any desired angle. We have used Mr. Chevalier's carrier for several months, and find it a very convenient and useful instrument.—ED. REC.

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### IRREGULAR DENTITION.

The following Article on the Management of Irregular Dentition, is copied from the American Journal of Dental Science. The writer has examined the practice recommended by Delabarre, Bell, Fox, Garriott, Koecker, and several others, at the same time giving his own views on this important subject. He coincides, in the main, with Mr. Koecker, and recommends, when there is not sufficient room in the jaw for the full number of permanent teeth, the extraction of the anterior molares in preference to the bicuspidates. That there are many cases where it is better practice to sacrifice the molares than the bicuspidates, we do not doubt, particularly when decay has commenced on their crowns, or when there is a strong predisposition to decay, so that these large teeth cannot be preserved for any great length of time; but, as a general rule, we prefer to extract the posterior bicuspidates to make room for the eye teeth.

The writer dwells much on the predisposition to early decay in the anterior molares, but says nothing of the caries which attacks the lateral surfaces of the bicuspidates. Now it often happens, after the first molar tooth has been extracted, that decay appears between the bicuspidates, and all dentists know how much more difficult it is to preserve these teeth than the molares, which, in most cases, decay on their grinding surfaces. It is true that after the molaris has been extracted, the bicuspidates often separate, and are then not so liable to decay; but this is not always the case unless the corresponding molares on the other jaw are extracted also, (which is not always necessary,) for the point of the posterior bicuspid of the superior maxillary often strikes between the bicuspid and molaris of the inferior and holds it so as to prevent it from moving backwards, and in these cases are as liable to decay as if the molar teeth had not been extracted.

Particular attention should always be given to the manner in which the teeth of the two jaws meet together; if the bicuspidates have long sharp points, which lock firmly together, the anterior bicuspid should always be extracted to make room for the cuspidati, while if the ar-

ticulation of the teeth is imperfect, when the jaws are closed, that tooth should be removed, which will cause the teeth to move in such a direction as to improve it as much as possible, whether it be a molar, or posterior, or anterior bicuspid. No rule can be laid down that will apply in all cases; but as a general rule, it is, we are convinced, better to sacrifice a small than a large tooth.—ED. REC.

## ON THE MANAGEMENT OF IRREGULAR DENTITION.

BY J. B. MITCHELL, M. D. SURGEON DENTIST.

IRREGULARITY of the second dentition, viewed in regard to its causes, is of two kinds: the one arising from a want of harmony between the development of the permanent set, and the decadence of the milk teeth, the other depending on a defect in the correspondence which ought to exist between the growth of the jaws and the increased volume of the second series of teeth.

Little difference of opinion at present prevails on the subject of the first kind of irregularity, the interference of the dentist being now usually limited to assisting the ordinary course of dentition, when it is tardy or over-active, but in no way anticipating the operations of nature. The profession is much indebted to M. Delabarre and Mr. Thomas Bell, for the improved views now so generally entertained in regard to the management of the particular defect of dentition. The same unanimity, with the exception of some matters of detail, may also be said to exist in respect to the regulation of the teeth, in cases where either kind of irregularity has been allowed to become permanent.

That species of irregular dentition, however, which depends on disproportion between the capacity of the jaws and the size of the teeth, forms the subject of several conflicting opinions. Two principal views have been taken by dentists, the distinguishing features of which are, on the one side, a tendency to allow things to take their course until remedial measures are called for, and, on the other, a leaning to preventive means.

In the system which is based on the former view, reliance is almost exclusively placed on the natural expansion of the jaws during the second dentition—no decisive measure being adopted till after that period has elapsed, when, if room cannot be provided in the dental arch for the irregular teeth, by artificial means, they must be extracted. To convey a satisfactory idea of this system, I cannot do better than quote from the writings of some of its most eminent supporters. "When each tooth is only a little too large," says Delabarre, "we should, before employing the traction by threads, file between the several teeth: we may by this means obtain from the whole the space of a third or fourth of a tooth, which ordinarily is sufficient: but we should sooner sacrifice a tooth than cut the rest too much, when the

size of these bones appears to be extraordinary, and, especially if there exists the least defect in the conformation of the jaws. When the fault is very decided, I find it more prudent to remove the teeth out of the row than to attempt to bring them within the circle. However, we should never be in any haste to extract them, for the jaw sometimes increases when we least expect it, so that, instead of there being a sacrifice of several teeth which it was supposed would one day have to be removed, that of one only may be sufficient. While we are thus temporizing, therefore, we are only courting a favorable opportunity. It is consequently only after being perfectly satisfied that the teeth, which are badly arranged, can never be rectified, that I attempt to remove them; and I usually practise this operation about the age of twelve or thirteen, for then the anterior arch of the jaw is susceptible of but little increase. When the removal of some of the irregular teeth becomes necessary, there are some which we should extract in preference to others; thus, all dentists agree to sacrifice a lateral or central incisor which is wholly out of the row, and the same may be said of the canines, when in a similar position, unless the bicuspid be diseased." Mr. Bell to the same effect observes: "If the irregularity be very slight, and the want of space trifling, it will be sufficient to pass a very thin file between several of the teeth, so as not to deprive any of them of the whole thickness of the enamel, and in this way a considerable space will be gained by the approximation of the teeth so treated, and the irregular tooth be brought into its place by moderate pressure; but if the want of space be so great as to afford no hope of its being remedied by this mode, it often becomes necessary to sacrifice one of the permanent teeth. It cannot be too strongly insisted on, that sufficient time and every possible encouragement should be afforded to allow the expansion of the maxillary arch, before either of these operations is had recourse to; and I have often had reason to congratulate myself upon the result of having refrained from employing them, until the age of fourteen or fifteen years should have decided whether they would be ultimately necessary; at which period the arch of the jaw has been found to have expanded sufficiently to admit the irregular tooth into its place. . . . If after the lapse of that period, during which the expansion of the jaw may have been expected to take place, an inferior incisor should be forced much out of its situation, it will be necessary to remove the irregular tooth itself; after which the others will approximate so as to close the vacancy, provided the teeth of the upper jaw do not interfere with the process. In the upper jaw, however, the removal of a central incisor would be too great a sacrifice; and it never, or scarcely ever, happens that such a step can be necessary. The loss of a bicuspid, or, at the worst, of a lateral incisor—the latter may almost always be avoided—will be found sufficient."

It will be readily admitted that the principles involved in the above treatment are tantamount to a total abandonment of preventive measures; and that the long delay which is recommended is equivalent to trusting to chance for the obviating of a defective arrangement, instead of adopting the means to prevent it. The character of this plan becomes the more apparent when we consider that, by the study of the constitution and predisposition of the patient, we have it in our power to predict, with considerable accuracy, what will be the ultimate development of the parts.

The fundamental errors of this system are its temporizing nature and the sacrifices that are entailed by the delaying of the treatment. In the first species of irregularity, this delay is rather to be commended than condemned, but in that kind of irregularity which arises from disproportion between the size of the teeth and the development of the jaws, I should consider the sacrificing of one of the permanent incisor or canine teeth, as little better than no treatment at all, or at least not such as one would expect from the superintendence of a professional man.

It was Mr. Fox who first developed the principles of the preventive treatment in these cases, and the practice, as laid down by him, affords a very clear statement of the means of managing this species of irregular dentition. The following are his very practical remarks on this subject: "Irregularity is often occasioned by the teeth being much too large for the space allotted to them, and then it will be necessary to remove one or more of the permanent teeth. When the incisores are perfectly regular, and the bicuspidates have appeared before the cuspidati, there is so little space left that the cuspidati are thrust too much forward. It has been the common practice to permit the cuspidati to grow down a certain length and then to extract them. This operation certainly removes the deformity of projecting teeth, but it destroys the symmetry of the mouth, and takes away two teeth of great importance. The cuspidati are exceedingly strong; they form the support of the front of the mouth, and in the advanced periods of life, to those persons who have the misfortune to lose the incisores, they furnish an excellent means of fixing artificial teeth: on these accounts they should be preserved, and therefore it will be right to extract the first bicuspidates on each side. The cuspidati will then fall back into the circle, and if there should be any vacant space, it will be so far back that no defect will be perceived. The first permanent molares often become carious soon after they appear; when this is the case, and the others have not proper room, considerable advantage always attends their extraction. Their removal permits the bicuspidates to fall back, and gives way for the regular position of the cuspidati. . . . If they be extracted before the second permanent molares appear, in a short time they will not be missed, because the bicuspidates will go back, and the second and third molares will come forward, so that no space will be left. The front

teeth may even derive much benefit from this gain of room, as there will probably be left a small space between them, which will tend to their preservation; for it is observed, when teeth are situated so close as to press hard upon each other, they almost always fall into a state of decay."

Mr. Fox then is very decided as to the desirableness of providing space for the teeth in those cases where they are obviously disproportionate to the limited size of the jaws, by the removal of two or more of the back teeth, even should they be sound; and in this he is followed to a certain extent by Mr. Bell, who allows, as we have seen above, that one, and even two bicuspidés, may be removed for the purpose of making room, and further admits, that a decayed molar may sometimes be sacrificed to attain that object. - He says: "As a general rule, it may be observed that in cases of the early decay of a permanent molar, it will be proper to remove it if there should appear to be a want of room in the jaw, as the bicuspidés will then be allowed to fall back and give sufficient space for the other teeth to come into their regular situation. This, however, like all the other operations for regulating or preventing irregularity, should not be employed until the advance of the teeth in the front indicates the absolute tendency to an irregular position." The first sentence of this quotation is sound both in principle and practice, but it appears to me that what it does contain of good is almost neutralized by the closing caution, the only effect of which must be to render the measure in many cases nugatory. The case supposed is one in which there is crowding of the teeth from want of room in the jaw, and where the extraction of a decayed tooth would furnish the space required, if performed early enough. What must be the effects of delay in such a case till the teeth have actually made an abnormal advance in the front of the mouth? Clearly to preserve in the jaw an unsound, and, therefore, injurious tooth, which must ultimately be lost, but whose removal, if effected in good time, would provide the additional accommodation necessary, and to run the risk, when it is extracted, after the teeth have advanced in the front of the mouth, that the space will be left permanently vacant instead of being profitably occupied. M. Delabarre also admits the propriety of providing space by the extraction of a small grinder if diseased, and hints at the removal of even a sound bicuspid in preference to sacrificing an irregular canine tooth; but he denies that the removal of a large grinder, under any circumstances, can be of use in favoring the arrangement of a canine tooth. His words are: "We should generally prefer to remove even one of these (bicuspidés) in order to make room for a canine tooth which we believe can be brought back with facility. The evulsion of a first great molar affected with caries appears to me to be but little capable of favoring the arrangement of a canine tooth, though it may be useful in assisting that of a tardy bicuspid." It may be said then, that all agree that the cases are not of unfrequent occurrence which demand

the sacrifice of one or other tooth for the sake of preventing irregularity, or of removing it when established. It is only as to which is the proper tooth to select for this purpose, that any difference of opinion prevails.

When any of the permanent teeth are in a state of decay at the time the operation is demanded, the indication is obvious enough: the diseased teeth ought to be extracted and the sound left, taking care, however, to attend to the effect on the symmetry of the mouth. In such a case it will almost invariably be the first molar that requires to be removed; as about the age when irregularity commonly occurs, it is exceedingly rare to find any other of the permanent teeth affected with caries.

It is when the teeth are all sound that there is room for a diversity of opinion; under these circumstances, the almost universal practice is to remove the first or second bicuspid. "It was the custom before Mr. Fox's work appeared," says Mr. Bell, "to remove the irregular tooth itself; but as the incisores and cuspidati are of far superior importance to the *bicuspid*, and as any partial vacancy which may remain is of much greater consequence near the front of the mouth than further back, it is much better, in all common cases, to sacrifice one of the *latter teeth*." "When from the arrangement I am led to believe that a small gap must result from the indispensable sacrifice of a tooth, I prefer to remove the second *bicuspid*, to facilitate the placing of a canine." (Delabarre's Second Dentition.) "When extraction is necessary [to make room in the jaws,] the *bicuspid* are the teeth that should be selected for this purpose, and usually the second should be preferred to the first." (Dr. Arms, in *American Journal of Dental Surgery*, V. v. p. 215.) "Whenever the space in the jaws appears too much confined, . . . one or more of the *bicuspid* may with incalculable advantage become a sacrifice." (Parmly's Lectures, p. 85.) "The teeth which are decayed should be extracted; but if all the dental organs are sound, we should remove the first *bicuspid*." (Gariot on the Diseases of the Mouth, p. 112.)

Mr. Koecker is the only writer that I am acquainted with who advocates the extraction of the first large grinders in preference to the bicuspid or other teeth. This author has gone minutely into the subject, and his views are particularly worthy of attention. "Those teeth," says Mr. Koecker, in his "Principles of Dental Surgery," "which are most subject to decay, least important, and the removal of which would afford the most relief to the whole set, are the proper ones to be chosen for extraction. As the loss of the incisors and cuspidati greatly disfigures the set, they ought to be preserved if possible; and I have hardly ever seen a case in which it was necessary to extract any of them with the view to give room to the rest, where an early attention had been paid to the state of the teeth. The preservation of the bicuspid, also, should be a matter of particular consideration; and the usual practice of extracting the first bicuspid teeth, to

make room for the cuspidati, ought to be avoided, as well as the removal of the lateral incisores, by an early treatment.

“The first molares are generally most predisposed to disease ; they are least important as regards both appearance and utility, and so situated as to afford, by timely removal, sufficient room for the anterior teeth, as well as for the second and third molares. If these teeth are extracted at any period before the age of twelve years, all the anterior teeth will grow more or less back, and the second and third grinders so much towards the anterior part of the mouth as to fill up almost entirely the vacant spaces caused by the removal of the first molares. In almost every instance all irregularity will be prevented by this treatment, and all the teeth will take a proper position. But besides this advantage, another more important benefit will invariably follow, viz. all the teeth will be improved in strength and health, and particularly the *dentes sapientiæ*, which will sometimes penetrate the gums much sooner, and prove of larger size, and possessed of greater firmness than usual.”

In order more fully to elucidate this subject, let us give an attentive consideration to the distinctive characteristics of the first permanent grinders. These teeth are the only ones of the second set in which ossification has commenced at the period of birth ; they are, therefore, the first formed of all the adult teeth. At the age of twelve months the ossification of the first permanent molares is pretty well advanced, while the second molares are usually found as mere shells at the completion of the first dentition. Such a vast difference in the period of formation of the first and second molares is a remarkable circumstance ; but if we turn our attention to the time of cutting of these teeth, we shall be still more struck with the individual peculiarities that are severally exhibited by them. While the second persistent grinders are not generally cut before the twelfth year, the first four grinders make their appearance about the age of six, before the milk teeth begin to be shed ; so that about twelve it is not unusual to meet with children who are furnished with twenty-four teeth, twenty of which, of course, are deciduous. This very early appearance of the first molares exercises considerable influence on their characters and constitution. Interposed, as it were, between the first and second set of teeth, they would appear almost to occupy an intermediate place between the two series. On this account some have recognized in them an analogy to the wisdom-teeth, and have termed them the wise milk-teeth. In conformation and mode of growth the three persistent grinders agree ; but in regard to the time of their appearance the greatest diversity exists. With no fewer than seven years between the ages when they appear, each of these three teeth may be said to belong to a distinct septenary period.

It is matter of every-day observation that the first molares, both in the upper and lower jaw, are the teeth which are most subject to decay. Indeed there are very few adults in whom they are perfectly

sound; and in a large proportion of children above eleven, decay will be found to have commenced in them. The statistics of extraction furnish corresponding results. Mr. Tomes, in his Lectures published in the Medical Gazette, states that out of 1736 teeth extracted at the Middlesex Hospital, 642 were first molares, being no less than 36 per cent. It is also often remarked that these teeth, from their first appearance are of a dull or slightly bluish color, very different from the complexion of healthy teeth, and uniformly indicative of incipient decay—an observation which Dr. Ashburner has had occasion to record in many of the cases of abnormal development and crowding of the permanent teeth given in his very instructive work on Dentition, and which might also be extended to the wisdom-teeth. This defective constitution and predisposition to decay in the first molares may be readily accounted for by a reference to the comparatively early period of their formation, and their consequent exposure to the effects of those derangements of health which are so frequent in infancy, and especially during the first dentition, as well as from their being in the mouth during the whole time of the shedding of the temporary set, when they are almost certain to be neglected, if not injured, by being made to perform offices for which they are not calculated. M. Serres has noticed the influences which so specially bear on these teeth: “J’observerai, comme je l’ai déjà dit, que tous les grands efforts portant sur les grosses molaires, et notamment sur la première.”

These considerations ought to be sufficient to determine the extraction of the first molares in preference to all the other teeth, for the purpose of fulfilling the indication presented by the species of irregularity under discussion. But there is an additional reason for adopting this practice in the peculiar position the first molar teeth occupy. Situated in the centre of the half circumference of the jaw—which, it ought never to be forgotten, is composed of two symmetrical members—they hold a place between those permanent teeth that succeed the temporary set and those that are superadded, both of which series form foci of irregularity, tending, the one forwards from the first molar as a fixed point towards the front of the mouth, the others backward towards the ascending ramus of the jaw. That irregularity to which the latter—namely the superadded grinders, are exposed, exhibits itself always at the period of the cutting of the wisdom-teeth, in the same manner that the irregularity of the former series, which the French happily enough denominate *dents de remplacement*, generally shows itself at the time the canine teeth appear. Anormal development of the wisdom-teeth, which depends on the want of space between the coronoid apophysis and the second large grinder, has attracted more attention from medical practitioners than that of the other teeth, on account of the sympathetic effect it gives rise to being very often of a violent and extraordinary character. Among Dr. Ashburner’s cases are some very remarkable ones of this irregularity, and every practical dentist is well acquainted with its na-

ture and effects. The usual practice in such cases is to remove the irregular teeth themselves when they can be laid hold of, and failing in that, the second permanent grinders. But this will be found unnecessary, if, in cases of want of consentaneous development between the teeth and jaws, the practice of Koecker is followed; for the extraction of the first molares gives relief both forwards and backwards, and when it is early had recourse to, the occurrence of irregularity is entirely prevented, and the health of the wisdom-teeth guaranteed.

The truth of these remarks cannot be better illustrated than by the following case from Dr. Ashburner's treatise: A shoemaker, aged 22, suffered from *tic douloureux*, stammering, and confusion of ideas, accompanied with obstinate constipation. "The jaws were small; the four last molares were wanting; the spaces for them were small. In the upper jaw the tubercles were prominent behind the second molares; in the lower jaw there was not room for the *dentes sapientiæ*. The first molar teeth had each specks in them, and were of a more blue tint than the others. With a conviction on my mind that this man was suffering from a retarded and obstructed development, I knew not how to afford him relief. If that part of each jaw which contained the germs of the wise teeth could grow faster, there would be room for the teeth to come through. But how was the tendency to growth to be given to them? Going into the country where a pure air would invigorate him, and make him expand his frame was out of the question. To give him iron and bark and other corroborants, in town, would do little good; but combined with an *eccoprotic* and alterative course, it was the only plan left. For to remove the four healthy teeth which prevented the egress of the wise teeth was an unwarrantable experiment. This man came backwards and forwards to me for several months. I varied his medicines. I gave him *colchicum* with *rhubarb*, and directed him to sponge his body with warm vinegar. Nothing relieved him; and I lost sight of him for fifteen months. He had been in the neighborhood of Birmingham with some relations; he had gained flesh, and looked more healthy and had lost the *tic* and the twitchings. The jaw had increased, and he had cut the upper wisdom-teeth; but the lower ones were not through, there was still too small a space. He had suffered much from decayed teeth, and had had three drawn, and there were four decayed teeth and a stump still remaining. The pressure from behind in the lower jaw had wrought a remarkable change in the incisor teeth. When I first saw them they were even; now they were huddled together, and lapped over one another. Nature had in this case made greater havoc with the teeth than I should have done had I not regarded the removal of four healthy teeth an experiment I had no right to make." (p. 143.) In this most instructive case there can be no doubt but that the timely removal of the four specked first molares would have effectually relieved the pressure both before and behind, and thus prevented the havoc

which Dr. Ashburner, with so much ingenuousness bewails ; and that without the loss of a single sound tooth.

One other case from the same source I cannot refrain from citing. It is that of a girl aged 15, who had spasms of the muscles of the neck, and other nervous symptoms amounting almost to paralysis. (Dentition and some coincident Disorders, pp. 208—11.) "This young lady's teeth being very unusually large, and the jaws not growing with sufficient rapidity for the space required by the coming teeth, so much pressure operated to keep them back that they could not come through. Under the idea that the developing teeth, which appeared to be advancing most rapidly in the lower jaw, required space, the two second molares were extracted. The benefit was not striking, but a burning pain, and sense of weight on the top of the head, about the frontal and parietal bones, becoming very urgent, it was thought advisable on the 16th of September, to remove the corresponding second molar teeth in the upper jaw. The operation was succeeded by immediate relief to the head, and a partial restoration of the power of moving the fingers of the left hand." The patient, however, did not at once get rid of all her painful symptoms, and Dr. Ashburner, with an impartiality which is as laudable as it is rare, closes the case with the following acknowledgment : " Had I been bold enough to sacrifice the four molar teeth which obstructed the development of the wise teeth at an earlier period, I feel convinced that I should have saved this young lady a world of pain and other evil." Undoubtedly such would have been the result, but it would have been preferable practice to extract the four first instead of the four second grinders.

I often meet with patients who, after having one or more of the bicuspidcs removed to afford room in the jaw, have, a few years later, lost the first molares from caries ; thus incurring a double loss, which in all probability would have been prevented by sacrificing the large instead of the small grinders. It is not uncommon, also, to see adults in whom the wisdom-teeth are so much out of their natural position as to be entirely useless, while the vacant spaces left by the first molares, lost from decay, attest that if they had been extracted early, the wise teeth would have had room to grow forward ; so that eight grinders would have been secured for use instead of only four or five, and no perceptible void left.

In deciding the question as to the sacrificing of the bicuspidcs or the first molares, it is not unimportant to recollect that about the time when it generally is desirable to perform the operation, the former have just appeared and are quite new teeth, whereas the latter have already been in use five or six years, and are, by that length of time, older teeth.

## PROCEEDINGS OF THE SOCIETY OF DENTAL SURGEONS OF THE STATE OF NEW-YORK.

At the annual meeting of this Society, held at the rooms of the College of Pharmacy, No. 411 Broadway, on Tuesday, September 12th, the Society was called to order by the President.

The Report of the Treasurer being called for, was read and accepted.

|                              |           |
|------------------------------|-----------|
| [Receipts from every source, | \$ 320 00 |
| Disbursements,               | 18 62     |

|   |           |
|---|-----------|
| Amount remaining in the Treasury,                           | \$ 301 38 |
| Amount due the Society for initiation fees and yearly dues, | 32 00]    |

The Committee on Mineral Teeth reported progress and was continued.

A communication from W. A. Kentish, relating to Dr. Levett's enamelled plates was referred to the Committee upon that subject appointed at a former meeting.

The President, (Dr. Covill) then addressed the Society, in an eloquent and forcible manner upon the advantages of Association among Dental Surgeons, and the necessity of strict professional integrity.

The Executive Committee then presented their report, which was accepted.

[The Report of the Executive Committee contained the following suggestions and resolutions for the consideration of the Society :

1st. Your Committee suggests that the Executive Committee be authorized to procure a suitable room and have it properly arranged and furnished for a Dental Lyceum, to contain a Library, Museum, and conveniences for practical operations in Dental Surgery, to be performed before any members of the Society who may choose to be present.

2d. In order that the Museum may be interesting and instructive, members of the profession be invited to present to the Society any specimens of disease or deformity, either of teeth, maxillary bones, or other parts, which they may be willing to part with ; also such instruments, whether ancient or modern, as will be calculated to give an idea of the state of the profession in the various periods of its rise and progress.

Resolved, That the Executive Committee be requested to make arrangements with some of the Benevolent Institutions, for furnishing subjects for practical operations before the Society.

Resolved, That every member of the Society who will devote, at the rooms of the Society, one or more days in a year, shall receive the thanks of the Society.

Resolved, That the Society charge for its public operations, the actual cost of materials, and no more.

Resolved, That the operations performed at the rooms of the Society, be open to the inspection of all its members.]

A letter was read from Dr. S. Mapes, regretting his inability to attend the meeting of the Society.

Dr. F. H. Clark then read an Essay on Mechanical Dentistry.

Dr. J. Lovejoy then read his Essay on the Importance of Filling Teeth.

The Society then, in Committee of the Whole, took up the suggestions contained in the Report of the Executive Committee, and after some time spent in discussing them, the following Resolutions were reported and adopted by the Society:

1st. Resolved, That the Executive Committee be authorized to rent a room, at an annual expence not exceeding one hundred and twenty-five dollars, for the permanent use of the Society, and that they be further empowered to furnish it with seats and other necessary articles at an expence not exceeding fifty dollars.

2d. Resolved, That the suggestion relative to contributions to the Dental Museum be adopted.

3d. Resolved, That the Executive Committee be requested to ascertain whether arrangements can be made with some of the Benevolent Institutions for furnishing patients for clinical operations, to be performed before the Society.

On motion, Resolved, That when this Society adjourn, it do so to meet at 7 o'clock this evening.

Dr. Allen submitted the following resolution, to be acted upon (according to the requirements of the Constitution) at the next Annual Meeting.

Resolved, That the twelfth Article of the Constitution of this Society be amended by omitting the word "annual" in the second line, and substituting the word *regular* for the word "annual," in the third line. Dr. Clark also submitted the following:

Resolved, That the ninth Article of the Constitution of this Society be amended by adding after the word "regulation"—It shall have power to grant diplomas or certificates of membership, under such restrictions as the Society shall impose.

Dr. Clark offered the following, to be acted upon at the next regular meeting:

Resolved, That the sum of one hundred dollars be appropriated out of the funds of this Society, for the improvement of Mineral Teeth.

On motion adjourned to 7 o'clock.

At seven o'clock the Society was called to order by the President.

The Librarian, as Chairman of the Library Committee, presented his Report, which was accepted.

[The Librarian, through the hands of Dr. Hawes, has received about one hundred volumes, (including pamphlets) on the subject of Surgical and Mechanical Dentistry, most of which, with the names

of the donors, have been acknowledged through the Dental Recorder.

There has also been subscribed in cash, the amount of fifty-six dollars, nineteen of which have been paid, viz; Mr. A. Jones, \$10; Mr. J. Alcock, \$5; Dr. Covill, \$2; Dr. E. Baker, \$2.

The balance will be acknowledged when received, as also several more books. The Committee are about arranging and numbering the books, so that in a few weeks they will be ready for delivery to the members.]

The annual address was then delivered by Dr. C. C. Allen, after which the following was adopted: Resolved that the thanks of this Society be tendered to Dr. Allen for his eloquent and instructive address, and that a committee be appointed to request a copy of it for publication. Said committee consists of Drs. Dodge, Lovejoy and Bridges.

On motion, a committee of three was appointed to take into consideration the expediency of procuring a legal incorporation of this Society, under the act passed at the late session of the Legislature. Said committee consists of Allen, Hawes and Bridges.

The following applicants for membership, whose names had been reported by the Recording Secretary, after being vouched for by several members, or recommended by the Executive Committee, were received into membership, viz: A. Hill, of Norwalk, Conn., F. P. Chase, of New-York city, and C. H. Stillwell, of Brooklyn, N. Y.

The following preamble and resolution were, on motion, adopted:

Whereas, this Society has been informed that certain persons have advertized that they were members of this Society, who were not, therefore, Resolved, That the Secretary be authorized to contradict, in future, all such statements in the same papers in which such advertizements may appear, at the expence of this Society.

The thanks of the Society were presented to Drs. Clark and Lovejoy for their Essays, and to the President for his Address, and copies requested for publication.

The thanks of the Society were also tendered to Dr. Covill for the able and impartial manner in which he has discharged the duties of President of this Society.

The Society then proceeded to the choice of its officers for the ensuing year, which resulted as follows:

E. BAKER, President. C. C. ALLEN, and J. LOVEJOY, Vice-Presidents. J. G. AMBLER, Recording Secretary. T. H. BURRAS, Corresponding Secretary. GEORGE E. HAWES, Treasurer. H. BURDELL, Librarian. GEORGE CLAY, C. D. BROWN, BENJ. LORD, M. K. BRIDGES and F. H. CLARK, Executive Committee.

Dr. Hill of Norwalk, was appointed to deliver the next annual Address, and Drs. Chase and Covill to read Essays before the Society at its next regular meeting. Adjourned sine die.

J. G. AMBLER, Secretary.

## DEATH FROM INHALATION OF CHLOROFORM.

In the London Lancet of August, we find two more fatal cases of inhalation of chloroform, one for a surgical, the other a dental operation. A female residing near Boulogne, in France, was overturned in a cart, and received a wound from a piece of wood in the upper and back part of the right thigh, three inches below the tuberosity of the ischium. She was thirty years of age, enjoyed, generally, good health, but had been treated some months before, for palpitation and chlorotic symptoms, which were relieved by steel. The wound was dressed by Dr. Gorre, surgeon to the hospital at Boulogne, who removed a foreign body from it. The following particulars are copied from the Lancet.

"On Thursday, the 25th of May, a fortnight after his first visit, Dr. Gorre was again requested to see the patient. He saw a necessity for opening the abscess more freely. Miss S. could not make up her mind to the operation, simple though it was; but having previously heard of the effect of chloroform, she proposed, herself, that that agent should be employed. Dr. Gorre consented unwillingly, and returned the following day, furnished with a supply of chloroform, procured in Boulogne. Assisted by a practitioner of Desvres, and joined during the proceedings by a midwife, at half-past two p. m. of the 26th of May, he poured about a drachm of chloroform on a handkerchief, and applied it to the mouth and nostrils of the patient, who was reclining on a bed. Immediately on the respiration of the vapour, the patient evinced agitation by moving the hands convulsively; this agitation quickly ceased, and she became motionless and unconscious, and the operator, thinking her in the necessary state of anæsthesia, made the incision he deemed requisite.

Dr. Gorre states that after he had made the incision, he heard one or two deep and laborious inspiration, but seeing no further signs of returning animation or consciousness, he examined more particularly, and found every appearance of life being extinct. Caustic ammonia was then freely applied to the face and chest; cold water and cold air were directed against the face; the fauces were irritated; and artificial respiration was assiduously kept up with the bellows. During an hour a movement of pulsation was observed in the course of the jugular veins."

During post-mortem examination, no particular change was found in the cranium except a slight congestion of some parts of the dura-mater and pia-mater. The pericardium contained an ounce or two of bloody serum. Her heart was considerably loaded with fat; large flaccid, flat, like an empty bag, without the least appearance of elas-

ticity, the walls of its different cavities evidently in juxtaposition ; when these were laid open they were all found quite empty ; no valvular disease observed ; walls of ventricles very thin and easily torn. The blood contained in the large veins near the heart was quite fluid and as black as ink.

In all the veins of the body there was found large bubbles of air, which greatly puzzled the Doctors. The following are some of the conclusions drawn by Doctors Rouxel and Gros, from the post-mortem examination.

“ First. Miss Maria S. has not died from asphyxia, properly so called, but in consequence of syncope produced by the suspension of the cerebral action and of the sensorial functions under the anæsthetic influence of chloroform ; syncope rendered more readily fatal in her case by the abnormal organic condition of her heart.

Secondly. The presence of an aeriform fluid in the venous system cannot be explained by the introduction of air into a vein of sufficient size open during the operation performed in the thigh, for, on the one hand, this superficial incision could not reach any vein of considerable calibre ; and, on the other, it has been established that it is only by veins near the heart, such as those of the chest and neck, that the respiration of air can take place. Besides this, syncope already existed when the incision was made, and the left ventricle had not then sufficient energy to send the air into the system.”

After examining several different hypotheses, they close their report with the following conclusion :

“ This is not the place to discuss or enter profoundly into all these considerations, nor to seek the solution of a problem surrounded with so many difficulties. At the same time it appears to us more rational to consider this case to have been one of the instances of spontaneous evolution of air, of which Morgagni and other authors have cited incontestible examples ; and to admit, in addition to the peculiar action of chloroform, an additional cause of death, which would render it more sudden and inevitable.”

The other case occurred in the office of Jones Robinson, Dentist, of London. We give the deposition of Mr. Robinson, taken before the coroner, which is fully corroborated by the female servant who was present during the inhalation and death of the patient, and the testimony of one of the physicians who attended at the post-mortem examination. Those who are curious on this subject, will find both these cases narrated in the *Lancet*.

“ James Robinson, surgeon dentist, Gower street, deposed that he had never seen the deceased until Thursday ; that he applied to wit-

ness on that day to have an operation performed on the teeth, but that being engaged, he (Mr. Robinson) was obliged to make an appointment for the following day, (yesterday.) Just after the deceased had entered the surgery, he said that his heart failed him, and that he would not have his teeth out without taking the chloroform. Told him that it would be over in a moment, that he had better not. He persisted: witness then called in the female servant, the footman being engaged. Put a drachm and a half of chloroform on the sponge of the inhaler; that is the usual quantity; then held the inhaler at a distance from his mouth, and he had not inhaled a minute, before he said "it is not strong enough; make it stronger." Witness then asked the girl for the bottle containing the chloroform, but before he could take it from her, to apply more to the sponge, the head and hand of the deceased gentleman dropped. Witness immediately applied cold water to his face with a towel, and poured cold water on his head from a pitcher. He also immediately dispatched his servant for the doctor, and slit up the sleeve of his (the deceased's) coat, for the purpose of bleeding him. At that moment the doctors arrived and made the attempt, but all their efforts proved unavailing. Had only used a drachm and a half of chloroform altogether: it had only been placed upon the sponge once. Believes that he has administered ether and chloroform, in his own practice and that of operating surgeons, between three and four thousand times. Not a second before deceased's head and hand dropped he was laughing and talking."

"Erasmus Wilson, F. R. S. deposed that he was present at an examination of the body, with Dr. Waters, and agreed with him as to the morbid conditions which he had described. He attributed death to the stoppage of the heart's action. On being asked to connect the history of the case as it had been proved on oath, with the post-mortem appearances, and then to state whether he attributed any ill effects to the inhalation of chloroform, witness said, that in all probability the death would not have happened if the chloroform had not been administered. The death, therefore, might be attributed to the action of the chloroform on an extensively diseased heart."

The verdict of the jury conformed to this medical opinion.

These cases show the importance of a critical examination of every patient before administering chloroform. Dental surgeons who are not medical men should be extremely cautious how they give it without the advice and consent of a physician.—ED. REC.

OCTOBER 1, 1848.

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## NEURALGIA.

To accompany the case reported in our last number, (page 230) we had penned a few remarks, in which we gave the proper credit, (to the American Journal, from which it was copied) but owing to the compositor, they were omitted.

Taking the account of this case as presented by the author, it appears to have been genuine neuralgia, and the exciting cause was exposure to wet and cold while returning from Mobile to South Carolina. The pain was confined principally to the teeth. But it is to the treatment that we would call the particular attention of our readers. The Dentist first examined the wisdom tooth, where the pain was most severe, and finding a couple of small cavities, he filled them with gold; but as the pain did not subside, he then extracted the tooth, although it was not considered the cause of the disease. After this the pain increased, and general treatment was then resorted to, "quinine, &c. &c." were given. The pain still continuing, attention was next directed to a molar tooth which had been filled four or five years, the filling removed, and the bottom of the cavity found clean and white. The remainder of the treatment seems to us so remarkable that we will quote the words of the writer. "I then drilled into the pulp, causing but little additional pain; the pulp was perfectly healthy. [How does he know this?] One eighth of a grain of arsenic was placed in the cavity and covered with wax. At the expiration of two hours the pain began to diminish. That night she slept well. I renewed the arsenic, putting in half a grain, and covering it with a tin filling. At the expiration of ten days I took out the tin, most of the arsenic had disappeared. . . . Three months have now elapsed since the operation. The neuralgic pain has not returned."

The whole of this treatment, although resulting in an apparent cure, seems to us as purely empirical as cutting the nerve of the ear to cure the tooth-ache, and a great deal more dangerous. We would like to know if Dr. Lee wishes to be understood as recommending drilling into healthy pulps and putting in half grain doses of arsenic to cure neuralgia. We know that arsenic is a powerful nervine, and has long been used as a remedy for periodical neuralgic pains, and the same effect would

probably have been produced if it had been administered in proper doses through the general system, instead of putting it into a healthy tooth, in a dose large enough to endanger the life of the patient. If this treatment had been unsuccessful, it would never have been reported for the readers of the Journal or Recorder.

Some years since, a lady who had been a patient of ours for several years, and who had long been a great sufferer from neuralgia, being under the treatment of a homœopathic physician, called on us by his direction, to have five teeth extracted. Three of them were healthy incisors, having only small gold fillings which gave her no pain or uneasiness, and the others were dead and irritating roots. We protested against extracting the healthy teeth, but recommended the removal of the dead ones, as we had often done before. We were overruled, however, by her physician, and at last reluctantly extracted the five. The pain was not removed by the operation, but continues to this day, and the lady now has the satisfaction of wearing a gold plate with artificial substitutes for the beautiful teeth which she has lost.

More harm than good must always, in the long run, result from such hap-hazard treatment. In neuralgia the teeth should never be tampered with unless there are some decided indications that they are implicated in causing or keeping up the disease. If Dr. Lee had previously tried arsenic, (which he does not assert,) as a part of his general treatment, and had failed with it, and if he wished to apply it locally to the nerve in which the pain was more immediately located, how much better would it have been to have put it into the wisdom tooth, which he had unnecessarily extracted, and which "was crowded and could be well spared," than to sacrifice a large and healthy molar. But the dose, (half a grain) is the worst part of the practice. A few years since, Dr. Wolcott, of Litchfield, Ct. was thought by many to have been poisoned to death by a much smaller quantity, introduced into a hollow tooth to remove pain. He himself was sure that the arsenic was the cause of his fatal illness. One sixteenth of a grain is all that should ever be applied at once, and for the purpose of destroying the nerves and vessels of a tooth, one hundred and fiftieth of a grain is just as effectual as half a grain. Many of our best dentists disapprove of the use of arsenic in the teeth in all cases, but if used at all, it cannot be with too much care.

## NEW METHOD OF SUPPORTING FRAIL TEETH WHILE FILLING.

It is a common thing to meet with teeth so much weakened by decay that they have been considered by dentists as too frail to bear any filling but cement, and many which have been filled with amalgam, tin, and other kinds of soft filling, have afterwards had substantial gold plugs put in them, which have lasted and done good service for years; thus convicting their former judges of a want of skill to execute, or courage to attempt a difficult operation.

That there are shells of teeth too much decayed to bear a gold filling, we do not deny; and such shells if filled with amalgam or any other substance, generally break away soon after they come to any hard use, leaving the amalgam to be masticated upon afterwards. In some cases, where there is sufficient strength to support the base of the filling, the amalgam forms a valuable substitute to bite upon for a long time; but by far the greater number of teeth filled with mineral paste, where the alleged cause for using it was a want of strength to sustain the pressure necessary to consolidate gold fillings, with proper care, suitable instruments and a requisite amount of skill, time and labor, might have been substantially filled with gold.

We are not about to discuss the merits of amalgam, but wish merely to encourage dentists to make the attempt to fill with good gold foil those teeth, (especially the incisores and bicuspidés) which they have been in the practice of stopping with paste.

The instruments in general use for packing and consolidating gold, are too large at the points, covering so large a surface of the filling that the force necessarily applied to condense the gold sufficiently is greater than a frail tooth will bear. If the point be reduced one half, the force may be reduced in the same proportion, and the pressure will be the same upon that part of the gold to which it is applied, but the time required to pack every part of the filling will be doubled. Thus the largest sized cavity may be filled with a solid mass of gold with the smallest pointed instrument, if sufficient time be devoted to the work, and but little pressure need be applied. When large blunt-pointed instruments are used, and the gold introduced in large pieces, it is very apt to be left in a soft and porous condition in the bottom of the cavity, as the force applied to the gold only consolidates that portion of it in immediate contact with the point of the instrument, whereas if a smaller point be used, it will penetrate farther into the filling, carrying it nearer the bottom of the cavity, and

if the point be small enough, it will pass through the whole of the gold, except that part of it which it carries before it quite to the bottom of the cavity; and if the point be applied in this way to the whole of the filling introduced, it will be left as solid as it can be made.

Apply this principle to the filling of teeth, and it does not appear strange that some operators spend several hours in packing gold into a single cavity. It is only when the sides of the cavity are thin and weak, that all this time and care is necessary. There are some teeth, however, where the sides have become so thin and frail that it would be exceedingly hazardous to attempt to fill them solid with gold, even with the smallest pointed instruments, without some additional support. Such teeth are generally in the front of the mouth where no great force has been applied to them for a long time, otherwise they would have been crushed before they became so much decayed; they are generally "pet teeth," that have been long used with great care for fear of breaking them. In such cases, great strength may be given, while packing the filling, by coating the tooth, (after thoroughly cleaning it and preparing it for the filling) with good plaster Paris. Let the plaster be built upon all sides of the tooth, except where the opening is, about a quarter of an inch thick, extending to one or two of the adjoining teeth, and it will be found to give sufficient strength to it to bear all the pressure necessary to make a substantial filling. About twenty minutes should be allowed for the plaster to harden before attempting to fill it.

We have adopted this plan in numerous cases, where the whole front of the cavity consisted only of enamel, and have had the satisfaction of seeing the gold shine through, without a single crack over it. A tooth treated in this way may be filled in half the time which would be required without any artificial support, and without any of that fear and trembling which often attend on operations of this kind.

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### NEW ALCOHOLIC BLOW-PIPE.

We have been shown by Messrs. Jones, White, & Co. a new modification of the common Alcoholic Blow-pipe for soldering. It consists of a spherical boiler of several different sizes, from one to two inches in diameter, from the bottom of which the pipe projects about half an inch, and is turned one quarter of a circle, so as to give a horizontal direction to the flame. On the side is attached a handle about six inches long, and near the top are a safety-valve and convenience for replenishing the alcohol.

When used it is to be held over the flame of a lamp until the vapor is generated, which, passing through the pipe in the bottom, ignites and forms the flame for soldering. The advantage which this blow-pipe is said to possess over the one in common use, is that the flame may be enlarged or contracted at the pleasure of the operator by moving it over the flame of the lamp below, in the same manner that the common mouth blow-pipe is managed. We have not tried it, and cannot, therefore, speak of its merits.

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### IMPROVED WAX-HOLDERS.

In a late number of the Recorder, we noticed a Wax-holder manufactured by Mr. Murphy, since which an improved article has been introduced by Dr. Cleveland, of Augusta, Geo. These Wax-holders are struck from one piece of plate to near the form of the jaw; that for the lower maxillary has a joint in the centre, so that the extremities may be spread wide or closed together to accommodate different sizes. They are very beautifully made, and will no doubt answer a good purpose.

When we have had very irregular gums to fit to, and have desired to take an impression with plaster of Paris, we have sometimes taken it first in wax, and struck up a plate to near the form of the part, and then placed the plaster in it: this answers a very good purpose; with a little practice, however, the common tins, with a thin piece of wax within them, partially moulded to the jaw, and then filled with plaster, will answer every purpose.

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### MEDICAL JOURNALS.

*The Ohio Medical and Surgical Journal.*—John Butterfield, M. D. Professor of the Practice of Medicine in the Starling Medical College of Columbus, Ohio, is the editor of this new Medical Journal, the first number of which we have just received. It is to be published bi-monthly, and from what we have heard of the reputation of the editor, we have no doubt will prove an interesting and instructive journal. The Starling Medical College, from its local position and the very liberal endowment which it has received, is destined to exercise a controlling influence among the schools of Medicine at the west. Among the names of the faculty we see that of one of our own teachers at the Berkshire Medical Institution—Dr. H. H. Childs. Dr. Childs, (or General Principles, as he was familiarly called by the students) has long been a teacher in several medical schools in New-Eng-

land ; he is a very popular man, and a thorough teacher. Wholly disregarding the idea of specifics for diseases, he teaches the student to rely on general principles, and to study and apply them at the bed-side of the patient.

*The New-York Journal of Medicine.*—From the July number of this periodical, we perceive that it has changed hands, its former able editor, Dr. Lee, having left. S. S. Purple, M. D. who has for the last year and a half assisted Dr. Lee, has taken charge of it. A new series has commenced, much improved in typography and arrangement.


*The Annalist*, a Record of practical medicine in the city of New-York, has commenced its third volume under the editorial charge of N. S. Davis, M. D. This is a periodical newspaper like the Boston Medical and Surgical Journal, published semi-monthly, and containing short practical articles, reports of cases, &c. It is a valuable periodical to the practical man who has not the leisure to peruse and study the larger and more elaborate journals.

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### OUR ADVERTISING SHEET.

We would call the attention of our readers to the Advertisements contained in the present number of the Recorder. No branch of business in our city has increased with more rapidity than that of manufacturing, and furnishing dental surgeons with the materials for their business. Large stocks of dental instruments are to be found on sale in numerous shops in the city, made to almost every pattern ever invented or contrived for the various operations performed by the dentist. In the line of artificial teeth, blocks and single teeth may be had in any desired quantity, the latter ready made, and the former at the shortest notice. Gold and tin foils are also made in our city of the finest and best quality, and sold at as low rates as they can be purchased for in any city in this country. Those who are desirous of furnishing themselves with stock or instruments, would do well to visit New-York and examine the beautiful specimens which are to be found in our city.

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 Those subscribers who have not paid for Volume second of the Recorder, will receive the last number of that volume, containing a Title-page and Table of Contents, on remitting to the editor Two Dollars. The present number is sent to all the Dentists whose names we have on our list. Those of our old subscribers who do not wish the work continued, if there are such, will confer a favor by returning the present number by mail.

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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Vol. III.

NOVEMBER 1, 1848.

No. 2.

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NEW-YORK, OCTOBER 17, 1848.

At the annual meeting of the Society of Dental Surgeons of the State of New-York, it was unanimously Resolved, that the thanks of this Society be tendered to Dr. C. C. Allen for his eloquent and instructive address, and that a committee be appointed to request a copy of it for publication. The undersigned members of that committee do most cheerfully comply with the above resolution, and request that Dr. Allen will publish, in the Dental Recorder, his address delivered before the society on that occasion.

Very respectfully and truly yours,  
J. SMITH DODGE,  
MARTIN K. BRIDGES.

NEW-YORK, OCTOBER 18, 1848.

GENTLEMEN,—

I have received with gratitude the very flattering resolution passed by the Society of Dental Surgeons of the State of New-York, at the late annual meeting, accompanied by your polite request that I would publish in the Dental Recorder the address which I then had the honor to deliver before that society.

I have feared that it would occupy too much space to please the readers of the Recorder, who do not feel that interest in our society that its members do; but as many of my friends, who are also subscribers, believe that the address contains enough of general interest to the profession to be acceptable to readers who are not members, I have decided to comply with your kind request.

Yours, very truly,  
CHARLES C. ALLEN.

To Messrs. Dodge, Lovejoy, and Bridges.

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## ADDRESS DELIVERED BEFORE THE N. Y. STATE SOCIETY OF DENTAL SURGEONS.

BY CHAS. C. ALLEN, M. D.

*Mr. President and Gentlemen of the Society:—*

It gives me pleasure to meet you at this first annual meeting of the Society of Dental Surgeons of the State of New-York. In the organ-

ization of this Society you have had much to contend with. The mode adopted for its formation was an experiment, and I may say a bold one; but the success which has attended it has, in my opinion, fully justified it, so that the hopes and expectations of its earliest friends have, thus far, been fully realized.

It would have been comparatively an easy task for a few Dental Surgeons, of similar views and feelings, to have assembled, drafted their constitution, bye-laws, and rules of order, and then to have invited others to join them and help to carry out the principles contained therein; but would this plan have met the views of those who were not consulted in the organization of the society? Is there any certainty that its principles would be such as to please any considerable portion of the practising dentists, upon which they could cordially unite? The formation of this society must have convinced every person who has taken any part in it, that there is among dentists a great diversity of opinion respecting the principles upon which such a society should be based—many conflicting views which must be compromised before a common platform can be formed upon which a respectable number of the profession can cordially unite. Under these circumstances it seemed advisable to call a general convention of all the dentists in the state, that all their views and feelings might be fairly represented and receive their due consideration. The present society is the result of such a plan, and whatever faults it may possess, we have the satisfaction of knowing have been acquiesced in by at least a majority of those who took interest enough in the matter to attend the convention and take part in its deliberations. That it has faults no one will pretend to deny; but we must trust to time and experience to correct them and gradually improve and perfect the work which has been so well begun.

On this our first annual meeting, I have been invited by several members, at an informal meeting held but a few weeks since, to address you on the subject of *Dental Surgery*. The shortness of the time allotted me to prepare an address in, together with other duties which I have been compelled to perform, and the very unfavorable season for literary pursuits, will, I trust, be a sufficient apology for the very imperfect and inadequate manner in which the duty will be performed.

In the remarks which I am about to offer, at this time, I propose first to take a glance at the present condition of the practice of dental surgery and the qualifications of those engaged in it, and then to point out some of the principles of science and art, a knowledge of which are important to the successful practice of it.

What is Dental Surgery? Is it a science or an art?—a profession or a trade? Does it bring upon those who practise it honor and respectability, or disgrace and ridicule? Does it confer substantial benefits upon society, or only minister to the vanity of those who are anxious to preserve the appearance of youth after the reality has passed away? These questions have frequently been asked, and at different times answered both in the affirmative and negative. A few years since I was credibly informed that a learned professor in the Boston Medical school, had no faith in the utility of the most common operation in dental surgery—that of filling the teeth. Nor was I much surprised at learning this, for a

leading dentist in Boston, who had acquired a handsome fortune by his practice, had, a short time before assured me, with much sincerity, that it was useless to attempt to fill front teeth, when decay appeared upon the anterior surfaces, for, said he, it is impossible to make the filling stay. I had an opportunity to learn from observation, soon after, that he was right, at least, so far as his own operations were concerned.

About the year 1835, the Boylston Medical Prize was offered for the best essay proving numerically the utility of filling carious teeth. I mention this fact to show that others besides the Boston Professor at that time thought that the utility of the operation remained to be proved. The *Medico-chirurgical Review*, in an article published but little more than a year since, says—"The present state of the profession (the trade we had better say) of the dentist, is one of the foulest blots in the page of medical history. In a branch of medical and surgical practice which ought to be associated with a good general knowledge of the principles of physiology and pathology, which can only be successfully and honorably followed by one whose professional education has been that of a physician and surgeon, whose information is only limited by the extent of the present improved teaching of our schools and the general practice of our hospitals, we find that every . . . charlatan who makes up for want of real knowledge of the profession by the most impudent pretension, every unhappy student who is plucked at the College or the Hall, considers himself fully competent to fleece the public in the character of a dentist, and to practise without knowledge sufficient to treat safely a whitlow or a cholic, a branch of the profession which includes as numerous and important a class of obscure sympathies and severe and even dangerous consequences, as those which are associated with any organ or system of organs in the human body." The editor, however, admits that there are many who do not deserve to be embraced in this disgraceful category.

I learn also, that the Academy of Medicine in this city, at a late meeting, decided not to admit any physicians or surgeons into that Society who were engaged in the practice of dental surgery, considering that they were not "regular practitioners of medicine."

These, gentlemen, are some of the opinions which have been expressed by learned men and bodies of men, unfavorable to the profession of dental surgery. I am happy to state, however, that there is another side to this picture, and that there are those who can not only perceive and appreciate the utility of the operations in dental surgery, but esteem and honor all who honor themselves in the practice of it, and place them in their estimation as high as they do the physician or surgeon.

The Massachusetts Medical Society, which in point of respectability, learning and talent of its members, will, I think, compare favorably with the New-York Academy of Medicine, or any Medical society in this country, has numerous members who have been engaged for years in the practice of dental surgery. The editor of the *Medico-chirurgical Review*, in the same article from which I have quoted, also states that he "could select a body of practitioners in London, every one a member of the Royal College of Surgeons of England, who need not fear a comparison with those of any other country, in knowledge of their

profession, in the education, manners, and feelings of gentlemen, in their 'status in society,' and in every other quality which ought to distinguish the professional man or the gentleman." The American Medical Association at its last meeting in Baltimore, received the delegates from the Baltimore College of Dental Surgery, and thereby placed that school on the same footing with the other Medical schools in the country. These gratifying facts should have been received by the Academy of Medicine as precedents, if they were needed, fully justifying it for pursuing the same course with those medical men who have chosen the department of Dental Surgery for their field of labor, and who still desire to retain their fellowship with the medical profession. I am not disposed, however, to find fault with the Academy of Medicine; it is a private affair and has a perfect right to decide who shall and who shall not be received as members. I only contend that the respectability of the dental department should not be affected by the refusal of the Academy to receive them into membership: nor do I believe that it will be so long as the dentists respect themselves and are well qualified to practise.

Gentlemen, you are well aware that within the present century the public, generally, has become convinced of the utility of operations upon the teeth for their better and longer preservation in a state of health and comfort. This knowledge, derived principally from the successful operations of a few skillful men, has created a corresponding demand for dental surgeons. In this country the demand being made so suddenly, and in the absence of any schools or colleges in which students could be fitted for practice, has been much greater than could be supplied with educated men; and owing to the want of any examination, or requisite qualifications, many, seeing the success of those already established in practice, have been induced to commence it themselves with but few if any qualifications to entitle them to the respect and confidence of the public.

Among these men there have been not a few who have received a medical and surgical education, and who, solely on this account, have felt themselves not only qualified to treat all the diseases of the natural teeth, but have also ventured into the purely mechanical department, and attempted to supply their loss by artificial substitutes. A few of these men who happened to possess the natural gift of mechanical ingenuity, or tact in the use of tools and instruments, have succeeded; and deriving great and signal advantage from their knowledge of the principles of medicine, have become justly celebrated, as skillful dental surgeons. But by far the greater number, possessing but little if any of the requisite tact, and relying mainly on their scientific attainments, have signally failed.

What is much to be regretted is that they have not the mental vision to discern the reason of their want of success, nor can they be made to comprehend how it is that the operations of an illiterate mechanic, without any knowledge of that divine art, which they pride themselves upon possessing, should be preferred to their own. By far the most melancholy circumstance, however, connected with this state of things is, that it has caused a bitterness of feeling to exist between these two classes of men engaged in the same pursuits; envy and jealousy on the one hand

and contempt and derision on the other, have kept apart those who should have mutually leant upon and assisted each other. The medically educated surgeon has regarded the mechanical dental surgeon, whose principal preparation for the practice of dental surgery has been in the workshop of some mechanic, and who has changed his pursuit from that of the mechanic to the dentist with the same facility that he has changed his green baize jacket for a broadcloth coat, as a disgrace to his profession—a usurper who has dared to assume the duties and responsibilities of a profession without being properly educated and duly appointed for the work. He has, therefore, classed all such, however skillful and dexterous they may have become in the manual department of *his* profession, as mere artizans, looking upon them much as the ancient physicians looked upon the barber surgeon, to whom was left the menial office of performing the manual operations in surgery.

This feeling has in some cases been carried to such an extent that they have refused to associate with any dentist who has not been medically educated, and have classed them all as charlatans. That these gentlemen have trusted too much to the cultivation of the mind, and too little to the education of the hand, is, I trust, apparent to you all. Hence we find that their advice upon the general management of teeth is good, while their operations are often defective, unsatisfactory, and fail to accomplish the end desired.

Among that class of mechanical dentists who have not been medically educated we also find some of the brightest ornaments of our profession: men who have by subsequent study and research added to their mechanical skill all the knowledge of those general principles of medicine which are important to the successful practice of dental surgery. There are many of the mechanic arts which are peculiarly adapted to the training of the hand for the manual operations of the dentist—such, for instance, as the jeweller, the silver-smith, the watch-maker, the machinist, and all others where dexterity in the use of tools and the nice adaptation of parts are essential to the perfection of their workmanship. Many young men, who have served their apprenticeship to trades of this kind and who lack the capital necessary to set up business for themselves, but are too ambitious or too lazy to toil as journeymen, being dazzled with the success which has attended a few individuals in our profession, have been induced to enter it themselves, with the expectation of speedily amassing a fortune. Happy are they whose golden visions have not been dispelled when rent-day came, by the iron-handed grasp of a relentless landlord!

Some of those who have thus come into our profession, have succeeded in making tolerable good operators. In simple cases they can fill a carious tooth with skill and dexterity, adjust a gold plate to the mouth, and place upon it a set of artificial teeth. They can extract decayed teeth after a little practice with considerable facility, and as nine-tenths of the dental operations are of this mediocre character, so these mediocre dentists generally satisfy their patients for a time, until some more difficult operations are required, when they fall into the hands of those who possess more skill and science. Dentists of this class do not generally stop to puzzle their brains about difficult cases. The investigation

of new operations and new remedies, the diseases of the antra, the palate, and those too of the gums, which are not cured by simple scaling, they leave to heads more learned and hands more skilled in the science of general surgery.

By the introduction of mineral teeth into general use, a vast amount of employment has been given to dentists of the mechanical school, and the training which they have received peculiarly fits them for this department. There is perhaps no mechanical occupation which requires more dexterity and skill, inventive genius, and patient, persevering industry, than that which is generally denominated mechanical dentistry. It is in this department that those excel whose previous training has been such as to educate the hand in the use of tools.

The above remarks are intended to be general in their application to these two somewhat distinct classes of dentists. Individuals there are in both who will be found qualified for either class, but these are exceptions, and it is believed that each of you will recognize the two distinct classes which I have attempted to describe.

There is another class still, to whom I will briefly allude. It is composed of individuals who possess but few if any of the peculiar talents which distinguish either class of those already described. These men are known to be among us, not by the excitement which is created about them but by the noise which they make about themselves. You hear their brazen trumpet of fame blown by their own capacious lungs—you are shocked by the discordant notes which are produced, and wonder if any can mistake them for genuine music. You behold their names in large capitals in the advertising columns of the daily press, their handbills are thrown into your doors, into the hotels, steam boats, rail-road cars, and every other place where they can be made to catch the public eye. These contain hyperbolic accounts of the wonderful cures and operations which they can and have effected. Their new and patent instruments, and methods of operating peculiar to themselves, upon the most scientific principles, their secret tinctures, powders, and various odontalgic remedies, are all narrated with sufficient brevity not to weary the man of business, nor disgust the votary of pleasure in these leaves, which they would fain make the world believe are for the healing of the nations. These men are generally profoundly ignorant, although on a superficial acquaintance you might take them for persons possessing more than ordinary cultivation and talents. From long familiarity with men of the world, they have acquired a self-possession, an impudent coolness, a polished brass, which is too often mistaken for the genuine coin, and greatly facilitates their power to do harm. But whether ignorant or learned, they are always thoroughly depraved, and do not scruple to tell the blackest falsehoods and resort to the deepest laid stratagems to delude and cheat their intended victims.

On the continent, we are told by tourists, that the quack dentists often appear in the public places where the people resort for amusement or recreation, dressed in the costume of the court, in splendid carriages with servants in livery. Here they harangue the people upon the importance of their teeth, the necessity of the immediate extraction of those that are diseased, and their own superior method and dexterity in operating, and

such is the fascination which they possess, and such the credulity of their listeners, that it is no uncommon thing for large numbers to submit to their manipulations on the spot.

Fortunately the people of this country are too well informed to tolerate such gross imposture as this, but they are often taken in by those whose characters are quite as depraved, and whose operations are equally worthless. If called upon to specify any particular individuals as types of the great order of quacks, I should say that Plough, the Craucours, and Malan possessed the genuine stamp.

From the preceding remarks it will be sufficiently obvious that we need a uniform system of dental education—a regular prescribed course of study and practice which every dental student shall be required to pass through before he can be recognized as a regular dental surgeon. It seems to me that the present indications in this country are that dental surgery is in future to be practised as a distinct profession, and that its appropriate position is between the science of medicine on the one hand and the mechanic arts on the other. So intimate is its connection with both, that it may appropriately be termed either a science or an art, for it partakes largely of both. It follows then, as a matter of course, that in order to practise it successfully, the student must thoroughly understand all those principles of medicine and mechanics which are to be applied to the operations of the dentist. It is a question of some importance how these can best be learned.

To many of you it is known that I have ever been opposed to the divorce of dental surgery from the science of medicine. Regarding it as one of the specialities of surgery, I have contended that they should be taught together in all our medical schools. They possess advantages in their different professorships, libraries and museums for teaching the general principles of medicine and surgery, which are of paramount importance to the dentist, that he cannot enjoy at the dental colleges, at least for some time to come. All that is needed at present is, that a professor of the Theory and Practice of Dental Surgery should be appointed, and the system would be complete. But if they are not disposed to do this, and are determined to repudiate and disown all who are engaged in its practice, as has recently been done by the New-York Academy of Medicine, then the only alternative left to dental surgeons is to unite their energies and establish their own schools and colleges, and teach their own students the science and art of "Dentistry" as a distinct profession.

Before speaking of those branches of science, the principles of which should be more particularly understood by the dental surgeon, permit me to say that there is a natural genius or aptitude which every individual should possess who designs to qualify himself for the practice of our profession. To almost every person possessed of common sense, nature has given a peculiar structure or disposition of mind which qualifies him for some particular employment, study, or course of life. I cannot better illustrate the peculiar gift to which I allude than by saying that he who did not, when a child, take special pleasure in that Yankee accomplishment called "whittling," who could not amuse himself with the construction of miniature wind-mills, trip-hammers, or other toys of a simi-

lar character, had better never turn his attention to the practice of dental surgery—he will find, when too late, that he has mistaken his calling.

So important is constructiveness, or the natural taste for mechanical employment, to the general surgeon as well as to the dentist, that I can, I think, safely say that no individual ever arrived at the highest degree of proficiency in either without possessing it. It matters not how learned he may be in the science or its collateral branches, he may be perfect master of the whole theory of dental surgery, an accomplished physician and general surgeon, be thoroughly familiar with all the principles of mechanics and the fine art of drawing and moulding the human face, he may be an accomplished linguist and musician, fully comprehending the nicest distinctions between the labial, lingual, and dental sounds, have iron nerves which are unmoved amidst the most trying and painful operations, joined to the finest sensibility and the most delicate and fastidious manners, in short, he may be accomplished in all else, but unless he is a good *tinker* he can never excel in the manual department of dental surgery.

It is one of the prerogatives of the constructive genius to comprehend the end from the beginning. The true artist will perform the work with his head before the hand begins, otherwise difficulties will arise at every step of the operation, alterations and changes must be made which cannot fail in the end to mar the beauty and perfection of the whole. An anecdote is told of a carver of images which illustrates this principle. On a certain occasion he was about to commence the image of a sheep, and while he stood hesitating, with his hatchet in one hand and the other supporting the block from which the sheep was to be wrought, a by-stander asked him what he was looking at and why he did not begin his work? "Ah," said he, looking steadily at the block, "I cannot yet see the sheep—I must first see that, and then all that remains to be done will be to take away the chips." Although the possession of this faculty is of the highest importance to the dental surgeon, yet it is one thing to "see the sheep," and another and very different thing to "take away the chips" in a neat and workmanlike manner. The creative and constructive faculties are entirely different—one plans while the other executes; the artist can often delineate the outline while he fails in applying the coloring; well educated surgeons often fail to become expert operators; men who have never given evidence of possessing any constructiveness, but abundance to the contrary, have nevertheless, often invented useful and complicated machines, and those medically educated dentists who fully understand the science yet fail ever to become expert in the practice of dental surgery, are examples further illustrating this fact. Although the dental artist may have a perfect conception of every step in the operation before he commences the treatment of an individual case, yet if his hand is unskilled it will refuse to obey the direction of the head—will be constantly committing errors and making blunders. In practice, therefore, the education of the head and hand do not always go together; the former is often apt to learn while the latter ever remains a dull scholar.

Having shown the importance of manual dexterity to the success of the dental surgeon, it remains to consider the best method of cultivating

it for the operations of dental surgery. To accomplish this requires a long course of practice in some of the mechanic arts. There are none which will not afford assistance to the dental student; but as the mechanical department is now practised, I know of none that comes so near it and which will teach him so many of the processes belonging to it as that of the jeweller: but better than this is it, to enter the laboratory of the dentist and there remain under the teachings of a competent instructor, until by practice he has become expert in every branch of the manual department.

Much assistance may be derived from the study of the theory of mechanics at the same time. Thus a knowledge of the mechanical powers such as the lever, the pulley, the wedge, the screw and the inclined plane, all come into play in the construction of instruments and the many varied and difficult processes for regulating misplaced teeth. There is hardly a single operation performed by the dentist in which some application of the various mechanical powers is not brought into action, and he who can apply and direct them upon the most scientific principles, other things being equal, will best succeed in his operations.

It is vain to say that a knowledge of these principles will come by practice. True, it will to a certain extent; but we need a knowledge of the practice of others to assist us in our own, and what are scientific rules but the recorded experience of all who have practised before us, telling us the best and easiest way to compass a certain end? And how are we to know that our own method is as good as that which has been found out and practised by others unless we become acquainted with theirs? Before a man is qualified to advance one step beyond others, to make a single invention or improve upon the works of those who have preceded or are cotemporary with him, he must know how far they have advanced and what they have accomplished: he is then prepared to strike out into new and unexplored fields of improvement, invention, or discovery. Thus much of the mechanical branch of our subject. I come now to speak of the medical.

Upon this subject much has been said and written. We have often been told of the necessity of medical and surgical knowledge to the successful practice of Dental Surgery. I have spoken of a class of Dentists among us who would have us believe that but little more was needed than a medical diploma to constitute a good dental surgeon, and I have endeavored to show the utter incompetence of medical science to perform wonders in dental surgery unless combined with manual dexterity. As well might we say that a knowledge of English grammar would draw eloquence from a stammering tongue, or make a pleasing and ready writer of one who had not learned the use of the pen.

The principles of medical science must ever lie at the foundation of a correct knowledge of dental surgery, for as no person can ever be competent to take charge of a complicated piece of machinery without a correct knowledge of its construction, so neither the surgeon or the dentist should tamper with this "harp of thousand strings," until he has made himself familiar with its construction, so as to comprehend the principles upon which it is tuned and the wonderful harmony which it is capable of producing. The dental practitioner is expected by his patients

to be able to answer any enquiries, which may be made of him, respecting the various phenomena that are manifested in connection with the teeth and adjoining parts. Thus he must be able to tell at the first glance a temporary from a permanent tooth—to explain why teeth perfectly sound and far removed from those which are diseased are so often attacked with pain: why pains in the ear, the temples and the muscles of the throat, and other parts still more remote from the mouth, accompany the toothache. To answer these questions with any satisfaction to ourselves or our patients, requires a considerable amount of medical knowledge, and particularly of anatomy, physiology, pathology and the principles of surgery.

I will not say that a critical knowledge of the special or descriptive anatomy of every part of the body, is essential to the dental surgeon whose operations are confined to the mouth and teeth, but the science of general anatomy, or the anatomy of the textures, is as essential to the dentist as to the physician. It is the object of general anatomy to classify the different solid materials which compose the human body and describe the peculiar characteristics of each, as, for instance, its mode of development during fetal life, its divisions and subdivisions, its physical, chemical and vital properties, its functions, modifications produced upon it by age, the diseases to which it is liable and the changes of structure which take place in consequence, while special anatomy describes each individual organ, giving its physical properties and relative situation in connection with other organs which go to make up the whole. Special anatomy is important to the dentist so far as the organs are concerned which he is called upon to treat; but all the knowledge that is necessary of the anatomy of other parts of the body may be obtained from general anatomy.

All the various operations which the dental surgeon has to perform are confined to but few organs in and about the mouth, but in these he is compelled to operate upon almost every texture of the body.

Thus those organs are made up of the Cellular tissue, the Vascular, the Serous, the Fibrous, the Cartilaginous, the Osseous, the Nervous, the Tegumentary, the Glandular, and the Muscular. Each of these tissues has properties peculiar to itself. They differ in texture, in functions, in their vital properties and in the chemical equivalents of which they are composed. They are affected differently by age, manifest different symptoms when diseased, and require different modes of treatment. You will therefore perceive the importance of this study to the dental surgeon, as constituting the foundation upon which all other medical knowledge is to be based.

The study of anatomy prepares the mind for that of physiology, which, while it is the most pleasing is also second in importance to no science connected with dental surgery. The formation and growth of the teeth from the embryo to the perfect organ, the complicated process of exchanging the temporary for the permanent set, the uses for which each class of teeth were designed by nature, the natural food of man, the manner in which it is prepared for the stomach, the whole process of digestion and assimilation, the circulation of the blood, and the saliva and other fluids secreted from it, the functions of the nervous system, with its won-

derful sympathetic connections which puzzle the most learned among us, are all embraced in the science of physiology, and should be so thoroughly understood by the dentist that he can explain the whole to his patients as far as they are known and taught in our medical books.

Physiology is the science of life, and I may say of normal or healthy life, and in this respect is the opposite of Pathology which teaches the nature, proximate cause and effects of disease. Now how can the practitioner of medicine or dental surgery detect the first manifestations of disease unless he first understands the healthy condition? As well might he detect a discord who had no ear for harmony. Of what use is it to the physician to feel the pulse and examine the tongue of his patient unless he has first acquainted himself with their appearance in the normal condition? The various functional derangements, produced by disease in the teeth, through the intimate sympathy which exists between every organ in the body, frequently call for the attention of the dental surgeon, and to detect and treat them with any degree of success he must be acquainted with the healthy condition.

Having acquired a correct knowledge of the normal condition of the human system, the student is prepared to study with advantage the abnormal which is embraced in Pathology. There is not perhaps in any department of medical science a greater field for experiment, research and discovery than in that of dental pathology. We know next to nothing of the nature of the diseases of the teeth and gums. In the anatomical and physiological departments we have had able minds at work, and they have penetrated far into the structure, formation, nature and uses of the human teeth. In the surgical too, there is, and has been for a long time, much talent and mechanical skill enlisted, and their triumphs have done much towards relieving and preventing the sufferings of humanity; but where are our dental pathologists? Who has satisfactorily explained the nature and causes of caries, the condition of the gums when they exude those vitiated and foetid secretions which we so often meet with, or the nature of the disease which causes the loosening and falling out of sound teeth? Why are these organs which, with the hair, are the last to decay after death, the first to go before? What great mistake in civilization has been committed to entail upon us these miseries and misfortunes from which the children of nature, with few exceptions, are so happily exempt?

These and many more questions which might be put, remain for some future dental pathologist to investigate and answer.

But notwithstanding so much remains to be done, much light has been shed upon the subject which should illuminate the pathway of every practising dentist.

Many diseases of the mouth have been carefully studied, and their pathological distinctions so clearly pointed out that they serve as valuable indications to guide us in our practice. Take as an example simple toothache, which may arise from numerous and varied causes. We see it produced by sympathy with disordered functions, as during the stage of pregnancy, from sympathy with other diseased teeth whether near or remote from it, from the application of various substances to exposed dental bone before the disease has reached the pulp, from simple inflammation of

the pulp, from inflammation of the investing membrane of the fang, and from disease of the gums or alveola. Every species which I have here enumerated requires a different mode of treatment, and pathology, by teaching us the distinctions between them, indicates the treatment proper for each.

Without this knowledge our practice must necessarily be empirical, for how can we adapt it to the successful treatment of a disease, the nature of which we do not understand? I might enlarge upon this branch of our subject by showing the different species of other diseases in the mouth, as those of the gums and antra, simple and complicated caries, and the great variety of diseases which attack the maxillary bones; but I should tire your patience by attempting it at this time. Sufficient has been said, I trust, to show the importance of this branch of medical science.

Having laid the foundation for a thorough knowledge of dental surgery by the study of anatomy, physiology and pathology, the student is prepared to consider that which is more immediately concerned in practice. Here the dental surgeon, as I have shown, is constantly operating upon almost every tissue in the body, some of them endowed with the highest degree of vitality in intimate sympathetic connection with almost every organ in the system. His operations sometimes cause considerable morbid irritation and inflammation which, not unfrequently, produce constitutional symptoms demanding active local and general treatment. He should therefore know how to detect the first symptoms of inflammation, when to combat and when to assist it, the different appearances which it manifests in the different textures, and the varieties of treatment which it requires. To illustrate the importance of the doctrines of inflammation, let us take as an example a simple gum-boil, and trace it through the various steps until it terminates in ulceration.

First we have simple irritation of the investing membrane of the fang, causing pain of various degrees of intensity, which is often communicated to other teeth, and to organs still more remote, by means of the continuity of the nervous texture. An impression is thus sent to the brain or nervous centre, which receiving the alarm immediately transmits, by its reflex function, a stimulus to the vascular texture of the irritated membrane. This stimulus of the vessels after a time causes a rush of blood to the part, and the period of time between the application of the exciting cause and the establishment of the vascular excitement—termed the period of incubation—is when preventive means should be applied; for as yet true inflammation has not commenced. With the vascular excitement we have the first step in true inflammation. The second is congestion of the part, when by over distention of the delicate vessels, their coats are beginning to give way and the fibrinous portion of the blood is being deposited in the surrounding or cellular tissue. Here we are leaving the confines of health and approaching those of disease.

As the period of incubation is the time when means of prevention should be applied, so that of vascular excitement, or of congestion, is when a resolution or scattering should be attempted, for when the inflammation is fully established, true resolution or restoration of the affected part to its original or normal condition is impossible. The next step in

the formation of a gum-boil is the establishment of true inflammation. Heretofore we have had only changes of function, now we have changes of structure. The power of circulation in the capillary vessels, is for a time gone, the blood has become stagnated, the coats of the vessels becoming softened and impaired in their cohesion give way, and the blood, now changed in its composition, is exuded into the surrounding parts, forming a wall of fortification between the confines of disease and health.

Suppuration is now in progress—the textures are breaking up to form an outlet for the pus which is now being formed. Here again our practice changes, and instead of attempting a resolution, we must adopt such means as will now assist in promoting the evacuation of the fluid. This step in the inflammation is termed ulceration, and with it is terminated the gum-boil. The progress of the inflammation which has resulted in this gum-boil is accompanied by certain signs denominated symptoms, which when closely watched indicate the treatment proper to be pursued. The most common symptoms are pain, heat, redness, swelling, throbbing, and not unfrequently an inflammatory fever affecting the whole system.

Inflammation of this kind is generally denominated acute; when it continues for a long time, as in fistulous ulcers of this kind it is called chronic, and then requires entirely different treatment.

My object in this illustration has been to show how intimately the principles of surgery are connected with our practice, and what advantage we derive in the treatment of diseases in and around the teeth from a correct knowledge of it. There are many other subjects connected with the principles of surgery which are of great importance to the dental surgeon. The diseases of the bones—the varieties of inflammation, as the erysipelatous, the scrofulous, the venereal, &c.; the varieties of ulcers also, as the simple healthy ulcer, the weak, the irritable, the indolent, the sloughing and the phagedenic, all of which require different modes of treatment—the antiphlogistic regimen and mode of treatment, in fine, the whole of the principles of surgery are so important to the dentist that they may, with almost equal propriety, be denominated the *principles of dental surgery*.

I have thus attempted to explain and illustrate some of the principles, both mechanical and medical, which should guide the dental surgeon in the various departments in which he is called to operate. I have alluded to but few of the latter, and those only which I considered of the greatest importance.

There are others, a knowledge of which is almost as important as those which I have enumerated, particularly Chemistry, which is both medical and mechanical. The properties of medicines, also, and the principles upon which they are administered, embraced in the study of *Materia Medica* and *Therapeutics*, are also important to every dentist who desires to be capable of treating all diseases which are indirectly as well as directly concerned in dental surgery.

Our profession would stand much higher in the estimation of the public, if every dental surgeon was as capable of treating the rare and uncommon cases which arise in and about the mouth, as he is the most common and simple. Often these diseases come first under the cognizance of the

dentist, who in most cases passes them by without noticing them, and soon after they fall into the hands of the general surgeon. I have known numerous instances where diseases of the antra, caries of the maxillæ, and cleft or perforated palate, have slipped through the fingers of the dentist simply because he did not possess the requisite knowledge and confidence to undertake their cure. These cases come directly within the province of the dental surgeon, and he should be qualified to treat them successfully. Being accustomed to operate upon this part of the body, he can handle it with greater facility, and has at hand conveniences for placing the patient in the best and most comfortable position for enduring the operation.

It is not medical science alone, even when combined with, and directed by mechanical skill, which constitutes the accomplished dental surgeon. The remark of Lord Bacon to a certain extent may be applied to him. "All knowledge is his peculiar province." He should be well informed upon all the topics of the day and capable of conversing well upon any of them. His manners should be those of the gentleman, and above all his character such as to command the respect and esteem of all who know him.

In the formation of this Society we have united together for mutual improvement, counsel and advice, and my earnest hope is that we may not fall out by the way, nor dispute about who shall be the greatest. Strife I hope to see, but that laudable strife whose object shall be to see who shall best fulfil all the duties which devolve upon us as members of a social, benevolent and scientific institution.

From remarks which have fallen from some of our members, I fear there are those among us who are too lukewarm while others are expecting too much from the organization of this Society. The question "*cui bono*" is frequently asked, what good will arise from it. Of what use is it for me to join a society of this kind? What benefits or advantage shall I derive from membership to compensate for the trouble and expence? The trouble and expence are both small, and upon this principle the advantages should also be small. I have never expected that the advantages arising from associations of this kind would be apparent at once, but that they will, if properly sustained, do much towards elevating the profession, I have not the least doubt. This Society has already had a salutary effect by drawing us together and thereby cultivating social friendly feeling. The tongue of slander has been hushed in many instances, explanations have been made and old misunderstandings thereby corrected. We feel more interest in one another and more pride in sustaining the honor of our profession. Men engaged in the same pursuit and frequently meeting each other face to face, have more regard for the rights of each other, and are much less likely to be guilty of unprofessional acts than when under no such restraint. A free interchange of professional opinions and views is taking the place of that narrow contracted course which has for its motto, keep all you get and get all you can. We have, I trust, learned that "there is that which giveth yet impoverish not, and there is that which withholdeth yet maketh not rich."

As yet we are but beginning, and as I have said I do not expect that

any great and astounding benefit will be derived by any one from membership ; yet I do believe, when we come to enter more into the details of the practical department of our profession, that the manipulations of many, when explained and illustrated, will be new and instructive to others, and that in this way, if in no other, a full equivalent for the trouble and expence incurred will be received.

It is by united effort that any cause can become great, useful and respectable ; at the same time individual effort and individual character must not be lost sight of ; let no one feel that it is a sufficient recommendation for him that he is a member of this Society. If you desire to improve the condition of your profession, and to place it upon that high and desirable eminence in public estimation to which its usefulness entitles it, let each of you take pride in sustaining the honor of this Society by casting your vote against the admission of all improper persons, by cultivating friendly feelings towards all honorable dentists, whether members of this or other kindred societies, by contributing your mite towards the treasury of knowledge, and above all by performing all your duties towards those who place themselves under your professional care.

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## ON THE FIRST DENTITION.

BY HARVEY BURDELL, M. D. DENTIST.

DENTITION, and the symptoms attending this process, as I stated in a previous number of the Recorder, should be well understood by the practical dentist, therefore I trust a few observations upon this important subject will not be out of place.

During the early period of infancy, organic increase and redundancy of vitality is necessary to the growth of the body. An exalted action in the capillary vessels becomes necessary to support these changes, and often the healthy boundaries are passed in the rapid development, and inflammatory action commences, and if the treatment of these incipient symptoms of disease is well understood, but little danger need be apprehended ; but on the contrary, if the physician or dentist who may be consulted, is ignorant and unskillful, the result may be that a favorite or perhaps only offspring is consigned to the grave.

It must be recollected that the child, before the advent of its primary or first teeth, is not, as in after life, an omnivorous being. The digestible organs of the infant are quite simple when we compare them with their condition in after life. In early infancy the salivary glands are not developed, or but partially so, and exercise no activity in emitting saliva, which is not necessary, for the milk from the breast of the mother is already adapted to favor the act of deglutition and digestion. Milk, in fact, is the only food nature has supplied for the nourishment of the child, until that change takes place which is indicated by the development of the first teeth.

The symptoms which accompany dentition are often of the most alarming and fatal character ; in fact all the diseases incidental to

childhood may be enumerated among those which not unfrequently attack the infant during this very critical period of its existence.

Spasmodic croup, a disease which prevails among children to a great extent, and hurries thousands every year from an earthly career, arises, in almost every instance, from *difficult dentition*. I will relate a case that occurred in our own practice. The parents of a child had for several years employed me as a dentist. Their child, about the time that symptoms of teething manifest themselves, was quite suddenly attacked with an illness, usually called croup or *tracheitis infantum*. The family physician was sent for as soon as any of the symptoms of illness was observed. He prescribed some simple remedy, and gave the parents to understand that in a few days the child would recover. The malady, however, increased, and the doctor was again sent for, and he continued his visits for several days, yet the child seemed to be sinking, and alarming spasms at short intervals occurred. The gums were examined but did not exhibit the usual symptoms of teething, and the physician was at a loss what course to pursue. The father called upon me and requested that I should consult with the family physician, as the nurse said the child's sickness was owing to the "difficulty in getting its teeth." After having consulted with the family physician, whose permission was with much reluctance obtained,\* I proposed dividing the gums down entirely to the process. The doctor, after some objections, consented, thinking, probably, if the child died, a part, at least, of the responsibility devolved upon another. I placed the child in an advantageous position, and during the prevalence of the spasm as the most advantageous period, separated the gums of the lower jaw *entirely down to the surface of the alveolar process*. The incision extended in a semicircular form, two-thirds of the entire width of the lower jaw. Considerable blood issued from the incision, and as the child swallowed this blood, I considered it judicious not to operate upon the upper jaw. To the surprise of the parents as well as of the family physician, only a few slight spasms occurred after the operation, and in twenty-four hours the child had so far recovered that it indulged in refreshing slumber. Within two weeks after this operation had been performed, one of the central incisores made its appearance in the lower jaw. All of the primary teeth successively appeared, and the child became robust and healthy.

\* The physician with whom I consulted, and who would, rather than compromise his dignity, send a human being to the tomb, considered it unusual to consult with dentists, who were, to use his own expression, "a class of conceited mechanics." I have since been informed that this same *homme tres savant* is an active member of the Academy of Medicine, and voted at a recent meeting of the Academy, not to admit dentists to Fellowship because they were not "regular practitioners of medicine," *although they may have graduated at the highest medical colleges in the United States*. The wise academicians, however, cannot alter the laws upon the subject in reference to what constitutes a regular practitioner of medicine. A certificate of membership from the county Medical Society where the dentist resides, constitutes him a regular practitioner of medicine, *de jure et de facto*.

Infantile remittent fever is another disease which ranks in frequency next to croup, and almost every case that occurs can be traced to difficult dentition. Those who have written upon the subject of the diseases of infants, which occur about the period of dentition, seem to depend more upon calomel and antimony than upon a free use of the gum-lancet. Even in cases where the gums are irritable and swollen, some have contended that they should not be divided; those who entertain such false and fallacious theories, however, should abandon their profession and seek some other employment more congenial to their conceited dogmas. It is necessary in every instance of infantile fever to keep the bowels open by the use of mild aperients, and also to keep the body warm and comfortable; yet the most important and only true remedy, especially where the gums are irritable or swollen, is to freely cut them down to the teeth, which, with gentle aperients, will cure the disease and remedy all the febrile symptoms.

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[From the Dental News Letter.]

### PLUGGING TEETH.

*Messrs. Jones, White & Co.*

GENTLEMEN—Agreeably to request, I will endeavor to furnish you with as concise a description of plugging teeth with gold as my time and abilities will allow.

As this operation is of ancient origin, and is practised to a much greater extent at the present day than at any other known period of the world, it is a sufficient reason that we should bestow upon it all our talents and energies; and that it is the most important branch of duty which engages the attention of the dental practitioner, no one will, I believe, for a moment doubt.

My remarks will be entirely confined to the use of gold as a substance for plugging, as I do not wish for a moment to engage in the storms of controversy which have extended over our whole country of late years, with reference to the use of the compounds of the baser metals and amalgam. Various as have been the descriptions of this operation by authors, there are none, as far as I have seen, that will enable the young practitioner to produce a very satisfactory result, and very few agree with regard to the manner in which it should be done.\*

There is no art, the mechanical execution of which affords a wider scope for a display of dexterity and gracefulness of manipulation than that of plugging teeth; for it is literally making a workshop of the mouth; and to approach a highly sensitive patient in a slovenly and bungling manner, must of necessity be rendering an unpleasant operation at best, really distressing and painful; hence many preparatory requisites, apart from the mere instruments used in plugging, are high-

\* I wish to be understood as writing for the young, and not for the old.

ly necessary. It is presumed that the patient is seated in a suitably constructed chair, for the maintenance of an easy posture in any desirable position—desirable as well for the operator as the patient; this is indispensable for the proper execution of any operation upon the teeth. Every patient should be supplied in the first place with a clean napkin, a glass of water, and a spittoon within convenient reach. Many remark that the water should be tepid, but this is not often requisite; water of the temperature of the operating room is generally most suitable, because the friction upon the teeth by the filing, scraping, &c. fevers them more or less, and cool water is more advantageous than otherwise, as it is refreshing, and keeps down vascular congestion of the teeth and gums. If a highly sensitive tooth is prepared for plugging, merely filling the cavity with a pledget of cotton will prevent a thrill of pain to the patient while rinsing the mouth, while lukewarm water favors a determination of blood to the mouth, and promotes a relaxation of the parts generally. The operator should invariably wash his hands and instruments before examining the teeth of the patient, to avoid unpleasant associations relative to cleanliness; this simple neglect may give the patient a disgust to every thing that he may do thereafter. There is no point on which a patient is more sensitive than this. He must never approach a patient without a napkin in his own hand also, because he should have the convenience of wiping every dampness of the saliva from his fingers, and any substance from his instruments that may get upon them during an examination of the teeth.

*Preparation of the Cavity.*—First determine as nearly as possible the depth of the cavity, with a view to the reduction of its margins, (I have reference here to the cavities on the approximal surfaces of the teeth,) and for this purpose the file is the most useful instrument,\* which should be of various construction to suit the different localities of the teeth; for the front teeth the usual separating file cut upon both sides may be used when it is desirable to reduce an equal portion of each tooth, but when one tooth is decayed and the other sound, a file cut upon one side only is generally most suitable, because we can not only avoid, if we wish, cutting away the sound tooth, but the smooth side of the file can be depressed against it, so as to cut away more of the affected tooth upon the posterior part than upon the anterior; an effect which is always desirable, in order that the separation shall be much wider upon the back parts of the teeth than upon the front, for two important reasons—first, that the plug may face backwards to obscure it from view, and secondly, that in the act of biting into any substance of food, it will glide upwards and outwards upon the inclined plane which the surface of the plug and tooth will present, as that is the direction of the motion of the inferior maxilla when biting with the front teeth. In this way the plugged surface is constantly kept

\* As the file becomes warm, as well as the teeth, of course it should be kept wet and cool, by frequently dipping it into cool water.

clean. To face the surface of the plug outwards by a careless use of the file is inexcusable when it can be avoided. It is in almost all cases desirable to reduce one half of the enamel of the sound tooth so as to make the approximal surfaces as nearly equal in appearance as possible, and that sufficient projection shall be left along the lower boundary of the cavity near the necks of the teeth to prevent the filed and plugged surfaces from ever touching again. It is frequently desirable to file the posterior margin of the cavity concave; for this purpose, a thin file with an oval cut, and a flat, smooth surface, is indispensable, because the smooth surface can be depressed against the anterior margin of the adjacent tooth, so that the oval surface will cut away the posterior margin of the affected one in a concave manner; I mean that the convex side of the file shall not touch the front parts of the teeth, unless they are much decayed. Looking from behind forwards, the separation should present the view of an abrupt termination of a cone, instead of a square notch or slit, which a file with two parallel surfaces is calculated to produce. As the enamel is thinner on the back parts of the teeth than the front, and frequently breaks away before the decay is observed by the patient, this method of filing is frequently indispensable.\* I do not wish to be understood that the front view of the separation between the front teeth shall also be of a cone shape;† yet they should be filed away sufficiently to remain slightly separate. If they should fall together at their cutting edges in a few months after they have been filed, then separate a little more, for the teeth will often decay between the plugs and cutting edges. In some few cases where there is a great disproportion between the breadth of the cutting edges and the necks of the teeth, back as well as front, which, when they are decayed near the gum it would be impossible to file away the cutting edges sufficiently to allow the necks resting together. In such cases it is not common for the teeth to decay near their coronal‡ extremities, and when they are not decayed, they should not be filed, but should be plugged, and a tape or piece of silk daily passed between them in order to keep the teeth and plugs clean.

With reference to the bicuspid and molar teeth, a similar rule for filing to that of the front teeth should be observed, except that the separation should present a shape resembling a cone with its apex towards the necks of the teeth, for which purpose a file of a similar shape should be used, as well as a file resembling the letter V,§ and be certain to cut away sufficient of the coronal extremities of the

\* The filed surface of a tooth should never terminate at an angle near the neck, but on the contrary it should terminate at nothing, in order that every portion of the exposed bone should be covered with the gold, so that in cleaning with a tape it will touch all parts of the plug and tooth.

† It should be the constant study of the operator in filing the front teeth to preserve their natural symmetry as much as possible.

‡ I shall use this term to indicate the cutting edges and prominences of all the teeth.

§ The files here mentioned can be procured at Mr. Murphy's, No. 110 north Fourth st.

teeth to insure a continued separation, and sufficient of the enamel of the face\* of the tooth, to prevent it breaking away by mastication after the cavity is plugged. Very frequently the facial margin of the cavity opposite the middle of the crown must be dressed in a concave line, running from the lingual to the buccal extremity of the tooth, as the enamel is more brittle, imperfect, and thin, corresponding with the crevices or cliffs of the faces of the teeth, than at its coronal extremities. The most important principle to be observed is, that the teeth be filed sufficiently to prevent breaking away after they are plugged, and present an inclined plane facing towards the opposite jaw.†

Another very useful instrument is a kind of chisel, similar to a joiner's small paring chisel, slightly bent, so as to bring the edge in contact with the tooth with facility. Some should be constructed with the edge parallel with the shaft of the instrument, similar to a strong gum lancet. These instruments made small are indispensable for opening the facial cavities, because the openings are mere crevices or fissures, and the enamel being very hard, a blunt burr drill will not enter very well, yet this form of drill is often invaluable, and any kind of a flat drill will become bound between the opposite margins of the cavities, and give great pain in attempting to rotate it. A small and pointed triangular drill will often be useful when the openings are very small, and triangular scrapers of different sizes are also requisite.‡ As the direction of the enamel fibre is from the surface of the tooth to its centre, of course its cleavage is in that direction, and the chisel leaves a thin and oblique margin to the cavity of decay, which must be reduced by the file, as a straight, thick and strong margin is necessary to fit the plug to.

If the foregoing papers meet with your approbation, I will be pleased to continue the subject in your next number, and speak of the further preparation of the cavity, characteristics of decay, the instruments used in plugging, &c. &c.

J. D. WHITE. M. D.

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CHLOROFORM IN DENTAL SURGERY.—Mr. F. B. Imlach, a dental operator of Edinburgh, communicated a paper to the Medico-Chirurgical Society of that city, which was sent to the Journal of Medical Sciences, and now appears in a pamphlet. It reads well, and must give dentists a good share of confidence in the administration of chloroform. His conclusions are, that chloroform saves the patient present physical suffering and previous struggles of feeling; and it enables the operator to perform his work with more satisfaction, certainty and success.—*Boston Med. and Surg. Journal*.

\* I shall use this term to designate the grinding surfaces of the molar teeth.

† Many are in the habit of separating the teeth with cotton, india-rubber, soft wood, &c. but it is as unsuccessful as it is unphilosophical. If the decay of the teeth is at all favored by contact, then the practice is unsound.

‡ The kind of scrapers here alluded to can be obtained at Mr. H. Kerns'. No. 293 Market street.

NOVEMBER 1, 1848.

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## FAIR OF THE AMERICAN INSTITUTE.

THE Twenty-first Fair of the American Institute was opened to the public on the 5th of October. The collection of machines, manufactures and specimens of every kind of American art, has never been excelled at any former exhibition; the attendance, too, has been unusually large.

It was to the specimens of dental mechanism, artificial teeth, etc. that our attention was mostly directed. As usual, there were a number of cases containing nothing worthy of the particular notice of the judges, the committee on premiums, or the dentists; they, however, answered the purpose intended by those who exhibited them, which was, in some cases, to procure a free admission to the Fair, and in others, to advertize the dentists who owned them, bringing their names and residences before the thousands who thronged the place for three successive weeks.

The specimens, in the line of artificial teeth, most deserving of notice, were exhibited by Jones, White & Co. These teeth have rapidly grown into favor with dentists throughout the whole country and in Europe. The manufacturers are entitled to great credit for the improvement which they have made in the forms of their teeth, especially the bicuspid and molars, and also for the peculiar translucent and vital appearance of the enamel; their gum teeth are certainly not excelled by those of any other manufacturer. The teeth exhibited at the late Fair, were a decided improvement upon those which they have heretofore made, having the enamel colored uniformly through its whole substance instead of painting the color on the surface. Painted teeth can never possess the depth and translucency of enamel which these teeth show; besides they are often changed by soldering, when the heat applied to their surfaces is a little above what is necessary to fuse the solder; a troublesome and vexatious accident which has often happened to those who have long used the painted teeth.

Specimens of porcelain teeth were also exhibited by J. & G. Brockway of Brooklyn, N. Y. and by John Mahony, and H. & S. Ross, of this city, which were very creditable to the manufacturers, and show an increasing attention to this branch of manufacture in our city and vicinity. Those made by Messrs. Brockway, were mostly blocks designed for whole sets, to be selected and adapted to any ordinary case without being moulded to each separate plate. We understand it is the intention of the makers to keep a supply on hand for the accommodation of those who prefer blocks, at the shortest notice.

Messrs. Jones, White & Co. received a silver medal, and the Messrs. Brockway the diploma of the Institute.

Mr. Levett exhibited several specimens of his enameled plates, which were very beautiful and attracted considerable attention. One had been worn six months in the mouth, and the enamel appeared to stand well. This enamel promises to be of great service to the profession for coloring the gold plates, ends of clasps, &c. which are sometimes unavoidably exposed, to the great annoyance of those who are obliged to resort to artificial teeth. A little more time is requisite to test its durability when exposed to the constant action of mastication and the secretions of the mouth.

Mr. Charles Rahn of Toronto, C. W. exhibited several specimens of artificial work; an entire double set with Stewart's patent springs, an upper set, designed for atmospheric pressure, and a single tooth. These teeth, Mr. R. assured us, were made entirely by his own hands; they showed great superiority in workmanship; but as they were of foreign manufacture could not receive the notice of the American Institute, which is designed exclusively for the encouragement of the arts within the United States.

There was also exhibited a plaster cast of a dentist in the act of extracting a tooth, which we only notice here for the purpose of condemning. Notwithstanding the pain inflicted by the extraction of a tooth, it must be confessed that there is something in the nervous hesitation and dread of most patients who submit to it, the grotesque and awkward positions which they frequently assume, and the expression of intense anxiety depicted upon all the features, which, when contrasted with the trifling nature of the operation and the professional coolness of the surgeon, is extremely ridiculous and comic, and never fails to elicit a smile from those who witness it. Although an admirable subject for the artist, we regard it as decidedly bad taste when the dental surgeon does any thing to expose his own profession to contempt or ridicule.

Mr. F. H. Clark deposited models, for exhibition, showing his improvement in the method of inserting pivot teeth; but by some accident the card was put into a wrong case and covered by other materials. It was not discovered until near the close of the Fair.

Mr. Clark's improvement consists in inserting a gold tube into the root, which is secured by a small screw, at its extremity, passing into the root, the head of the screw being as large as the inside of the tube, and coming in contact with the inner end of the tube, holds it fast. The pivot is split at its extremity, which causes it to spring over a slight projection on the inner side of the tube into a corresponding notch in the side of the pivot holding it fast. This catch is similar to the common "snap," used in bracelets, necklaces, &c. except that the catch is at the other end of the tube.

The advantages claimed by Mr. C. for his improvement are, that the tube may be inserted into a root decayed in the funnel form,

and the decayed part filled solid with gold around the tube ; the tooth may also be removed at pleasure, which insures its perfect cleanliness, and prevents it from tainting the breath in the slightest degree.

### OPERATING CHAIR.

Mr. M. W. Hanchett, of Syracuse, N. Y. has been exhibiting to the dentists in this city, during the past week, his "Patent Attachment for regulating Dental and Surgical Operating Chairs." It consists of a cast iron base, raised four or five inches from the floor by four ornamental feet attached to the lower side, like those of a common stove. In the centre of the base is inserted a nut about four inches long, through which plays a double threaded screw fourteen inches long, for raising or lowering the chair, like a common piano stool. The upper end of the screw is divided into two arms which, diverging outwards and upwards, form a semi-ellipsis, terminated at each end by a gudgeon or pin. These gudgeons are attached to the sides of the frame of the chair, on a level with the lower side of the seat, and midway between the front and back part of it. On these gudgeons the whole chair rests and turns, so that the patient may be placed in any position, from the upright almost to the horizontal.

To hold the chair firmly in any desired position, there is a semicircle of iron extending from the front to the back part of the seat, at right angles with the arms of the screw which support the chair. This semicircle is attached to the middle of the front and back of the under side of the seat, and extends down so low that when the chair is turned back or forward its lower edge just clears the top of the screw. On this lower edge there are notches like the cogs of a wheel, into which a spring latch catches, and holds the chair in any desired position. One end of the latch is attached to the left arm of the screw, and the other extends to the right side of the chair, terminating in a convenient handle. Depressing this end throws it out of the notch, when the chair may be turned back or forward, and on removing the pressure it springs up into a notch and all is fast again.

There is less machinery about this chair than any one we have ever seen, where so great a variety of motions was secured. The whole plan is at once simple and convenient.

We have endeavored to describe it, not for the benefit of the patentee, but for those of our readers who may like the plan and wish to procure it for their own use. Any ordinary operating chair may be put upon this attachment, which may be had of Mr. Hanchett for about twenty dollars.

### DENTAL NEWS LETTER.

The first number of volume second of this publication has been received. It is enlarged to twenty-four pages, printed quarterly, and

contains several articles of general interest to the profession. We have copied from it an article by Dr. J. D. White, the commencement of a series, upon the subject of filling the teeth. Dr. White has long been known to us by reputation, as a thorough and faithful operator, and we are always glad to see any thing from the pen of such a man. He is one of the foremost among the party of young Dental Surgeons, in Philadelphia, who have originated the Penn Association of Dental Surgeons, whose motto seems to be, "let your light shine."

The Dental News Letter contains the proceedings of the last meeting, from which we intend to publish the report upon Gilbert's plate. What has become of the Dental Intelligencer? This question has been often put to us, but we are unable to answer it further than that the last number which we have received was published last March; since that time it has been suspended, but whether it is to be again revived or not, we are unable to say.

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### DENTAL SURGERY IN AMERICA.

The Day-Book, (an evening paper edited by D. Francis Bacon, M. D.) in the course of an article upon the New-York Dental Recorder, has the following remark: "By the way, the Dental Recorder's articles would be just as "scientific," if, instead of "*dens sapientia*," its contributors would use the word "wisdom-teeth." Readers *may* learn the meaning of this little piece of jocose Latinity, as they do that of "incisors," "bicuspidis," and "molars," which are needful and proper scientific terms, but the English of it is just as scientific as the Latin."

"The subject of dentistry is one upon which the Americans are entitled to feel some national pride, as the art has indisputably attained greater excellence in practice here than in any other country—perhaps because its practitioners have a greater field, on account of the disproportionate prevalence of diseases of the teeth in this very peculiar climate. In no other country are there public institutions for the cultivation of this branch of surgery, and the formal education of students of it, by lectures, demonstrations, and other advantages of a regular medical college course. Every American must *feel* a strong *personal* interest in all that tends to the improvement of this very useful art."

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DENTAL LIBRARY.—Contributions of books and cash have been made to the Dentist's society of the state of New-York, until a collection of books has been obtained containing copies of most of the standard works on Dental Surgery. Since the report published a few months since, the librarian has received the following donations: from J. S. Dodge, \$10; J. S. Ware, 2 vols. Wistar's Anatomy; F. P. Chase, Wilson's Anatomy and Dunglison's Physiology, in 2 vols.; E. D. Fuller, Harris' Dental Surgery and Koecker on the Teeth.

# NEW YORK DENTAL RECORDER.

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SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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## A CASE OF IRREGULAR TEETH,

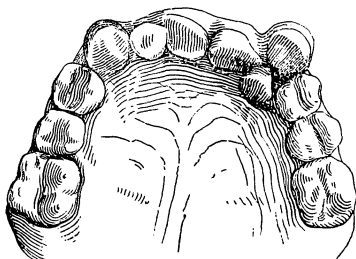
BY GEORGE E. HAWES, DENTIST.

*Communicated for the New York Dental Recorder.*

At a meeting of the Society of Dental Surgeons, of the State of New York, the subject of the following operations was brought by Dr. Hawes before the Society. Castings of all the teeth, taken before any attempt had been made to regulate them, were also shown. They were examined with much interest by the members present, and Dr. H. was requested by the Society to furnish a description of the treatment of the case for publication in the Recorder, which request he has kindly complied with.—ED. REC.

In the spring of 1847, Mr. — of this city, called upon me with his son, a lad of about twelve years of age, the symmetry of whose countenance was much injured by the protrusion of the lower jaw, and the irregularity of the teeth in the superior maxillary. At this time undue prominence of the chin and lower lip existed to a great degree; the upper lip also being much contracted. The following cut was intended to show the arrangement of the teeth in the superior maxillary before the commencement of the operation, but the artist has failed to represent the cast correctly. The bicuspidæ on the right side of the jaw,\* he has made to stand in their proper position—they should, in this design, incline towards the interior of the mouth nearly one-half their width. The incisors also, are not sufficiently contracted—with the exceptions of these errors, which are partially remedied in the next drawing, the cut is correct.

\* In the following description the terms right, left, &c., apply to the teeth as they are in the mouth, and not as represented in the cuts.



It will now be observed that the molares, the bicuspidés on the left side, and the two cuspidati, are the only teeth that occupied their true place in the dental line. All the remaining teeth were so much contracted as to be received within the circle of those in the inferior maxillary.

The first step in the attempt to restore the teeth to their proper order, was to extract the anterior bicuspid on the left side. This tooth was so much affected by caries as to be the cause of occasional suffering, and by its removal afforded an opportunity to bring the second bicuspid forward, and the cuspidatus back, which was thus accomplished. The two teeth were confined together with a loop of india rubber, part of which was divided so as to bring half over one point of the bicuspid to prevent its extending too far under the gum.

The next point in this operation was to bring the bicuspidés on the right side into their proper place, which were confined in their false position by the teeth in the inferior maxillary, as will be seen in the accompanying cut representing the mouth closed.



In order to prevent the opposing force occasioned by the occlusion of the under teeth upon those designed to be regulated in the superior maxillary, it was considered necessary to extract the inferior molares in both of which caries had reached the nerve. Then a gold plate was prepared in the usual way, covering all the teeth in the lower jaw; which being accurately adjusted, was sufficiently firm to masticate upon, and easily removed by the patient for purification. To this plate blocks of gold were soldered over the bicuspidés, separating the jaws far enough to allow all the teeth which were subsequently to be regulated to pass without interfering with those of the opposite jaw. The block on the right side was filed to an edge, forming an inclined plane, the vertex of which caught the inside points of the superior bicuspidés. A thick bar of gold in the form of the true dental arch, was now

constructed, secured by a clasp at one end to the right superior molares; the other to a cap of gold adjusted to the right cuspidatus and resting upon it. Through this bar, or frame, holes were pierced at the proper point, to introduce ligatures of india rubber to confine the bicuspidates and bring them up to the frame. The ligatures were retied every few days, as the teeth yielded to the influence of this apparatus, and the block on the left side of the plate reduced, that the teeth might strike more forcibly upon the inclined plane on the right; by this treatment these deviating teeth were brought into their proper position.

Finding, at this stage of the operation; that the circle on the right side had enlarged; and also, additional room had been obtained, on the left, as the cuspidatus and bicuspid had been brought together; further proceeding was delayed for a short time to give the teeth, which had been moved, an opportunity to rest, and become firmly settled in their new position. During this interval the plate on the lower teeth was removed, but the ligature on the left, and the frame on the right of the upper ones were continued, removing them only for the purpose of cleansing. The importance of keeping the teeth confined to the bar will be apparent to all who are familiar with such operations. The previous extraction of the molares rendered it peculiarly necessary in this case, as the articulation of the teeth was not sufficient to support those adjusted.

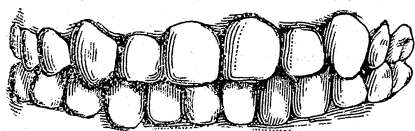
In continuing the operation, it was now necessary to bring forward the superior incisors, so that their circle might fall over that of the corresponding inferior ones. To accomplish this a frame was made on the same principle as that before described for the bicuspidates. This extended outside of all the teeth in the upper jaw, and was clasped at each end to the anterior molares. Opposite the incisors it formed an arch corresponding to that to which they were to be arranged. The plate for the lower teeth was now again brought into use, the blocks being renewed and made of sufficient thickness to permit the incisors to be brought forward. Being thus arranged the eye tooth on the right was drawn obliquely backwards by a ligature through the frame, and made to close up the space which was gained by bringing the bicuspidates outward. This was done with the intention of having the central incisors, when properly arranged, present themselves in the centre of the mouth, as it will be seen, by referring to the cut, that they previously inclined to the left.

Before proceeding to bring forward the incisors two straps of gold were soldered to the lower edge of the frame and bent in the form of hooks under the cuspidati, thus affording greater security to the frame by preventing the ligatures from drawing it upwards towards the gums. All the fixtures being now firmly adjusted, a ligature was attached to the right lateral incisor and brought obliquely forward and outward towards the cuspidati, and in a similar manner each of the others were made to follow.

By referring to the cut exhibiting the teeth closed, (Fig. 2) it will be observed that the left lateral incisor is entirely concealed from view, as it occupied a position nearly half an inch back of the line to which it was to be arranged. Hence the adjusting of this one tooth was the most tedious and difficult of any in the operation. Yet it gradually advanced into the circle, and firmly occupied its place with the others in about seven months from the time the ligature was first applied. By removing the under plate, the patient was at this time, just able to bring the points of the superior incisors over the inferior, thus preventing the bicuspidæ from coming in contact.

The upper teeth and lip now being considered physiologically correct, all further proceedings with regard to them was rendered unnecessary, but the deformity which still existed in the lower part of the face, occasioned by the ungraceful protrusion of the under teeth, remained to be remedied in order to complete the operation. To accomplish this, all the teeth in the lower jaw must necessarily retreat. The extraction of the second bicuspidæ would perhaps have been considered by some, most advisable, if the molares had not already been decayed and removed. But as no formula can be given that would be safe to follow under all circumstances, a resort to such means and appliances must be adopted as the necessities of each case require.

In conducting the present case, the lower teeth were made to retreat and conform to the arrangement of those in the superior maxillary by placing india rubber between the bicuspidæ on each side. When these had been separated sufficiently by the india rubber, it was removed and placed forward between the bicuspidæ and cuspidati; this was worn until the bicuspidæ on each side came in contact again; in a similar manner the cuspidati were also moved back to the bicuspidæ. The patient in the meantime, having no teeth that could meet upon each other but the incisors, was entirely dependent on them for mastication; consequently, when the india rubber was removed from the last place, the firmness of the superior incisors, which were still confined to the frame, resisted the occlusion of those in the lower jaw, in such a degree, as to cause their rapid retreat into the position represented in this design.



The result so gratifying to all interested, was accomplished by several distinct operations, and as the teeth and the patient needed intervals of rest, more than twelve months elapsed before this operation was considered complete. Since that time the appearance of the teeth and general contour of the face have been gradually improving.

## GILBERT'S PATENT CAVITY PLATE.

The following report was made to the Pennsylvania Association of Dental Surgeons by a committee appointed to investigate the merits of Mr. Gilbert's patent plate. It will be recollected by the readers of the Recorder that we published in the December number of 1847, a communication from D. H. Porter, containing a description of this plate. We had previously tested it several times in our practice and have applied it in numerous cases since with uniform success.

Whether Mr. Gilbert was the first to make use of this central cavity (for in this the whole merit of the plan consists) or not is a matter about which there has been some controversy; but one thing is certain he was the first to make known and explain it to the dental public and, as he informed the writer of this, desired nothing from those who were unwilling to recompense him for the time and expense which it had cost him, notwithstanding he has secured a patent on what he believes to be his own invention. For this liberality he is entitled to the *thanks* of the profession, if not to more substantial recompense.—ED. REC.

(From the Dental News Letter.)

*To the President and Members of the Pennsylvania Association of Dental Surgeons:*

GENTLEMEN—The Committee appointed by you to examine into the merits of "Gilbert's Patent Cavity Plate," respectfully beg leave to report that they have attended to the duties assigned them as far as in their judgment is necessary. With reference to the priority of invention of this plate, your Committee do not pretend definitely to report, inasmuch as numbers claim the originality from ten to fifteen years back; still, there does not seem to be any evidence of it, except their own assertions. However, some operators have constructed a plate with a number of chambers, and consider it to have been done for the same purpose, as the single chamber claimed by Gilbert, or in other words, that the invention of one is equivalent to the invention of the other, and that substituting one chamber for any number does not entitle the modification to the credit of originality. Now inasmuch as Mr. Gilbert was the first (as far as your Committee are aware) to make the Cavity Plate public, he is entitled to the credit of the invention, so far as it subserves the public good, for we make no doubt that those who have been capable of confining it to the secrets of their own closets for fifteen years, would do so that much longer; however your Committee will leave that part of the subject, believing that his patent papers will protect him against any unjust attacks from pretending claimants.

With regard to its practical uses, your committee would report, that in a great number of cases, it has been most markedly successful, and in cases, too, where springs had been unsuccessfully applied by different operators, and they believe also that this happy result has been from the use of the "Central Cavity Plate."

This central cavity seems to be a kind of "neutral ground" or reservoir, as well for atmospheric air as the elasticity of the gum, and it is well known that the alveolar process is constantly undergoing slight absorption until it entirely disappears, and, that when the plate extends over the entire surface of the hard palate, it will sooner or later impinge with more force upon it, than upon the alveolar ridge, and produce a rocking motion of the artificial teeth, a difficulty which this central cavity in a measure prevents, and as there is some elasticity in the gum at all times, unequal pressure upon any part of the operation will produce a rocking motion even of a well-fitted plain plate or a plate with cavities upon opposite sides; the hard palate will act as a pivot upon the central part of a plain plate, from the yielding character of the gums over the alveolar process, and destroy the full influence of the atmospheric pressure in many cases. This cavity plate can be applied in a large number of cases for setting a single tooth, or an indefinite number, as the accompanying specimen will illustrate.\* It is an instance where two teeth have been injured by clasps, but which are now worn with entire comfort and usefulness. By an examination of a great number of cases which have been worn from four to seven months, and kept in the mouth constantly, (except while cleansing them,) no irritation of the hard palate was observable, or unpleasant consequences in any respect. In some few cases where it has not been entirely satisfactory, it seems to have resulted rather from an improper adaptation of the plate, condition of the mouth, or an inability of the patients to accommodate themselves to it, than a want of power in the plate; notwithstanding it is believed where springs have been applied, the cases are worn with greater usefulness than had the cavity not been used also.

*Resolved*, That a certificate of approval of the Central Cavity Plate, should be awarded Mr. Gilbert by this Society.

|         |                    |              |
|---------|--------------------|--------------|
| Signed, | J. D. WHITE, M. D. | } Committee. |
|         | S. T. BEALE, M. D. |              |
|         | ELY PARRY, M. D.   |              |

The resolution reported was approved, and received the signatures of the officers of this Society.

\* We saw the plate above referred to.—*Ed.*

## LOCAL ANÆSTHESIA.

The London *Lancet* for August contains two articles on the local effects of Anæsthetic agents, written by Prof. Simpson, of Edinburgh, and Mr. T. Nunneley, of Leeds. Dr. Simpson states that early in the present year he was led to make a variety of experiments on this subject, in consequence of being assured, on what he believed to be satisfactory evidence, that a dentist at Limoges, in France, M. Perot, had the power of extracting teeth with little or no pain in consequence of previously rubbing some obtunding agent on the gums.

If this be true it is a subject of the deepest importance to every practising dentist; but when we reflect upon the numerous reports of this kind that have been circulated by dentists and their friends, to gain a little present popularity, not forgetting the recent humbug, in a neighboring city, about the improved operation of "cutting the dental ligament," and removing the strongest teeth with the fingers, we must confess that we are incredulous whenever we hear of any new process for removing teeth without pain.

At the February meeting of the Medico-Chirurgical Society of Edinburgh, Prof. Simpson stated that in the human subject local anæsthesia of a portion of the gums could be produced by rubbing the part with hydrocyanic acid. After this date he tried to produce this effect by other agents, some of the results are related in the following extract:

"I tried at the time a great variety of substances in order to obtain this local anæsthesia, such as various ethers, bisulphuret of carbon, benzin, aconite, &c. Of all the agents employed, the effect of prussic acid was most decided and complete; any part of the gum rubbed by it speedily became benumbed and insensible, but the resulting degree of anæsthesia was by no means sufficient for the purpose required. The results of these experiments were stated orally to the Edinburgh Medico-Chirurgical Society, at their meeting on the 16th of February.

"Before that date I had met with one instance in which local anæsthesia of the human hand had been produced in a young lady, in consequence of her accidentally holding in it for a considerable time a scent-bottle containing some chloroform. I tried at various times to produce a similar result in myself and in others, by keeping a hand for a short time wrapt in a napkin, soaked in chloroform and other anæsthetic agents, but with, indeed, little or no appreciable success till I used the vapor of chloroform raised by heat—the hand, for the purpose, being immersed in a deep jar, in which a small quantity of chloroform was poured, the jar placed in a basin of water of the

temperature of 150 deg., or upwards, and the wrist or fore arm being, at the same time, surrounded by handkerchiefs, so as to prevent the escape of the vapor. In the last number of the *Monthly Journal*, (p. 48.) these experiments are noticed, and it is correctly stated, that the degree of local anæsthesia of the human hand, which I had been thus able to produce, is only "partial and perhaps superficial."

The experiments of Prof. Simpson upon some of the lower orders of animals are very interesting, as he has succeeded perfectly in producing local anæsthesia; thus, in the common earthworm he was able to produce this effect by applying the vapor of chloroform to individual parts and portions of the worm, as the head merely, or the tail merely, or the middle part, the head and tail remaining unaffected. Similar experiments were tried upon the centipede, the water-newt, and frogs, all of which were perfectly successful. Experiments upon the rabbit and guinea-pig were less successful, although very decided effects were produced. In the human subject the local effects of these anæsthetic agents are modified by circumstances; which are sufficiently detailed in the following extracts:

" 1. When the hand is exposed to an anæsthetic vapor, it betimes presents the sensations of a limb benumbed by compression of the nerves—the sensations, in fact, of partial paralysis. Usually after a short time a glowing or burning feeling is perceived in the parts most exposed, and gradually there supervenes a sensation of thrilling and prickling, (like a limb asleep,) which deepens more and more. The hand at last feels stiff and clumsy, and as if enlarged, and painful impressions, as pricking, pinching, &c., are felt less and less. The skin becomes red. After the hand is removed from the vapor, it is generally a considerable time before its usual normal feelings are restored. The nerves of motion are usually, apparently, as much affected as the nerves of sensation.

" 2. The vapor of chloroform proved stronger than any other that was tried. When one hand, for instance, was immersed in a jar containing the vapor of sulphuric ether, and the other hand in a jar containing the vapor of chloroform, (both jars containing similar quantities, and subjected to the same degree of heat,) the hand in the chloroform jar was both more speedily and more deeply affected than the other. In addition to the vapor of chloroform and ether, I tried comparative experiments with the vapors of aldehyde, bisulphuret of carbon, iodide of methyle, &c. The aldehyde had little or no effect of any kind. The iodide of methyle produced a very severe burning sensation, and left the hand intensely red for many hours afterwards, but with no marked anæsthetic influence. Among several of us that tried the vapor of bisulphuret of carbon, only one bore it for any great length of time, (about an hour,) and in him it did not

render the hand anæsthetic in any very appreciable degree. In myself and others the sensation of heat and burning soon became so utterly intolerable as to force us to withdraw the hand.

“ 3. The anæsthetic effect is increased both in rapidity and in degree by immersing the hand with the cuticle softened and moist. When one hand, for instance, is immersed without any preparation, and the other is prepared by being bathed and fomented for ten or twenty minutes previously, the latter almost immediately begins to tingle under exposure to the vapor, the dry hand not for some minutes. The degree of anæsthesia is also ultimately deeper in the moistened hand.

“ 4. The hand when plunged in liquid chloroform is usually somewhat more deeply apathized than the other hand simultaneously held in the vapor of chloroform. This was the more general result with those who tried the experiment; but in some, the chloroform vapor was as anæsthetic, or more so than the liquid. Few persons can keep the hand for any adequate length of time in liquid chloroform; the sensation of burning becomes so intense and painful as to force them to withdraw in a very few minutes. On one occasion, I held my hand for upwards of an hour in liquid chloroform, without the part being more deeply apathized than it would have been by exposure to the vapor. One of my pupils, Mr. Adams, held his hand in the liquid chloroform for upwards of two hours: no great degree of local anæsthesia resulted. In these cases, in which the hand was long steeped in liquid chloroform, the sensation of burning returned severely from time to time, as if in waves, during the experiment; and on removing it from the jar, the feelings of heat were temporarily aggravated. The normal sensibility of the parts speedily returned, and were completely restored within a few minutes in all, but the skin sometimes remained red and injected for a longer period.

“ 5. The degree of delicacy of skin in the person or part exposed to the anæsthetic vapor influences the result. In females, I have seen the degree of the local anæsthesia of the hand, that was produced, much greater and deeper than I could ever render it in the male subject. In applying the chloroform vapor in small cupping-glasses, &c., to different parts of the body, as the inside of the arms, &c., the resulting degree of local anæsthesia seemed, in a great measure, regulated by the tenuity of the skin of the part experimented upon. The skin of the axilla seems too tender to allow of the vapor being applied for a length of time sufficient to produce anæsthesia. One of my students, who kept both of his lower extremities enveloped in strong chloroform vapor for three continuous hours, felt no appreciable local anæsthetic effect from it.

“ 6. When strong chloroform vapor is locally applied to mucous surfaces, the attendant sensations of heat and smarting are too severe to allow of its sufficient continuance. At least, this is the result that I have obtained by applying it with small glasses to the inside of the

lips, the tongue, and eye. Mr. Nunneley states, as we have already mentioned, that before operating on a difficult case of artificial pupil, he had applied for twenty minutes a small quantity of the vapor of chloroform to the eye, by means of a small jar which accurately fitted the orbit, with the effect of rendering the parts nearly insensible. Dr. Duncan and myself have several times tried to repeat this experiment upon ourselves, but in none of the trials which we made with the eye either shut or open, could we endure the burning action of the vapor, upon the part above two or three minutes, and with no other result except always rendering the eye experimented on red and injected, and suffused with tears.

“7. The degree of anæsthesia produced in a limb, by exposure of it to the strong vapor of chloroform, does not, in general, perceptibly increase after fifteen or twenty minutes. The same sensations continue if the hand is still retained in the jar; but an increased length of exposure does not, after a time, produce a corresponding degree of local insensibility.

“But the degree of local anæsthesia produced in the human hand or skin, by exposing it to the local action of the vapor of chloroform, has never, in my experiments, been by any means so perfect and complete as to annul the pain of any severe operation, such as deep incision or the amputation of a finger. As compared with the other non-exposed hand, the chloroformed hand is generally rendered, to a marked amount, *less* sensitive, but the insensibility is never, I fear, so deep and perfect as will save the patient from the pain of the surgeon’s knife. In short, I entirely doubt whether, in the human subject, we shall ever be able to reduce the knowledge of the possible reduction of local anæsthesia to any practical purpose.”

The following is taken from an article by Mr. Nunneley, from which it appears that his experiments upon the human subject, for the production of local anæsthesia, have been more successful than those of Prof. Simpson.

“At the branch meeting of the Provincial Association, at Leeds, June 7th, Mr. Nunneley remarked that chloroform appeared to be the most deleterious of these agents, to require the greatest care in administration, and that the boundary up to a fatal dose is by no means well marked—that of two animals, in apparently the same condition, the same dose being given in precisely the same way to both, the one will speedily die, while the other will bear it with impunity,—that from the effects observed, he has reason to think the ultimate effects are in some respects not dissimilar to those produced by prussic acid. That to some animals, as for instance, the newt, the frog, the toad, some fish, slugs, snails, and some insects, the effects are more rapidly fatal than prussic acid of Scheele’s strength; and that even in higher animals, when under the influence of an incomplete dose, or recovering from the effects of a large dose of either chloroform or

prussic acid, the phenomena are in many respects very similar; and that the numerous post-mortem examinations which he has made fully corroborate this opinion. Acetic ether, with which he had made numerous experiments, possesses very considerable anæsthetic powers,—bisulphuret of carbon, to some extent, possesses similar powers, and, so far as his experiments go, of a safe character, the animal speedily recovering.

“But of all these remedies he believes that sulphuric ether will be the least noxious to life, and he intends hereafter to lay his experiments, already very numerous and varied, before the profession.

“The action of all or most of these agents might be produced locally by local application, the sensorium being unaffected, consciousness retained, and the limbs not subjected to their influence, being unaffected. Either by immersion in a small quantity, or by the vapor applied merely for a limited period, a limb may be rendered perfectly motionless and senseless, and fixed in any desired position. Mr. Nunneley stated that he had immersed his finger in these fluids for about half an hour or an hour; at the end of this period the finger was nearly powerless and insensible, and it was forty-eight hours before the effects entirely disappeared, a sensation of heat and discomfort extending along the tract of the nerves to the axilla. Before operating for artificial pupil, he had applied for twenty minutes the vapor of chloroform to the eye, by means of a small jar which accurately fitted the orbit, rendering the parts nearly insensible. The first effect of these agents, when locally applied, is to produce redness, heat, and smarting, which subside; followed by swelling and redness of the integuments, which remain for some time. Mr. Nunneley has found that he could completely paralyze any limb of frogs or toads by immersion or exposure to the vapor in about five minutes, or less; that if the exposure to the influence were continued longer than was sufficient to produce a local effect, this influence extended to the corresponding limb on the other side. For instance, if one hind leg became too much influenced, the other hind leg partook of the same effect—if the fore leg were too much effected, then the other fore leg became so likewise, and subsequently the whole body—a result strongly corroborative of his experiments with prussic acid, as detailed in the last volume of the *Provincial Transactions*, and strongly supporting the opinions of Dr. Marshall Hall on “reflex action.” These views were illustrated by a series of interesting experiments on frogs and toads, which, after immersion for a few minutes, the limbs became insensible, and were amputated in repeated portions without any symptoms of pain whatever.

“Mr. Nunneley stated that by this new mode of application to the hind legs of rabbits also he had been enabled to amputate the toes without the least indication of feeling. He was not prepared to state that was the best mode of applying it, or the exact quantity to be used; such can only be determined by a lengthened series of experi-

ments on different animals, which he is at present zealously pursuing. He has, however, communicated to us the above remarks on the important physiological local effects of anæsthetic agents generally, which had not hitherto been announced."

## ON THE DESTRUCTION OF THE NERVES IN THE TREATMENT OF CARIOUS TEETH.

By J. B. MITCHELL, M. D., &C., LONDON.

After remarking that, "there is no department of practice in which so many pernicious errors are continually permitted to go uncorrected as that of dental surgery," Dr. Mitchell refers to a report of a case published in the *Lancet* of Nov. 24th last, in which the writer states—"I then extracted two superior molars, and cut across and destroyed the nerves of the four upper incisors."

"I am perfectly aware," (says Dr. Mitchell) "that the latter of these operations is of every-day occurrence among dentists, but it is, nevertheless, one that cannot, for a moment, be defended on scientific grounds. In the case detailed, the four upper incisors were doubtless affected with caries. Now the natural progress of dental caries is from decay of the crown to destruction of the pulp, and gradual wasting of the fang; the latter process being uniformly accompanied with more or less of morbid action in the periosteum of the socket. The most painful of these several stages is, beyond doubt, that in which the pulp is affected; but the subsequent stage—involving as it does, the periosteum—is infinitely more pernicious to the health and well-being of the rest of the mouth. A single quotation from Sir Benjamin Brodie must set this at rest. "The inflammation on which the toothache depends," says that gentleman, in one of his clinical lectures, "terminates, as it always does, in the death of the pulp in the tooth. - Then the whole tooth dies, and is now like a portion of dead bone, or any foreign substance, stuck in the jaw." (*Medical Gazette*, vol. xv. p. 347.) Operations, therefore, for the artificial destruction of the pulp of a carious tooth, have no higher object in view than the hurrying of the disease through its most painful stage, in order the sooner to induce the more advanced and far more injurious one. They are, in fact, operations for the more speedy production of stumps; their sole aim is to remove pain at the expense of a greater evil. As such, it is evident that they have nothing in common with the operations of general surgery, which have for their object ultimate benefit, though purchased by immediate pain; and it is but natural to suppose that they owe their origin to the urgency of the patient rather than the suggestions of science.

"When a tooth is so far gone as to be incapable of restoration without destroying the pulp, the sooner it is extracted the better, for the mouth is sure to suffer ultimately in proportion to the number of dead teeth allowed to remain."—*London Lancet*.

## REMARKS UPON THE PRECEDING.

The preceding article is a specimen of the trans-atlantic wisdom of M. D's., upon matters relating to dental surgery, and is a fair specimen of the amount of knowledge possessed by those enjoying the same degree in this country, including many of the sage members of the Academy of Medicine, who have lately disowned, among their medical brethren, all who are engaged in the practice of dental surgery. The language which John Hunter used, when referring to the dentists of his day, may, with great propriety, be applied to the writer of the above. He has evidently got "beyond his depth," and is meddling with "matters of which it is to be supposed he has not acquired a competent knowledge."

If Sir Benjamin Brodie had been accustomed to observe the progress of decaying teeth with the care which he bestowed upon many other diseases, he would have learned that vitality often remains in the fang of a tooth, preserving it healthy in the socket for years after the pulp has become entirely obliterated. Could he make "a portion of dead bone or any other foreign substance stuck in the jaw," grow there with the same firmness and tenacity which a tooth that has been forcibly separated from the jaw acquires, if restored to its socket before its vitality has departed?

No sane man would think of destroying a nerve which had not been exposed by caries penetrating to it; but the operation of extirpating the dental pulp, when exposed and suffering from inflammation, and subsequently filling the teeth, we look upon as one of the most signal triumphs of modern dental surgery. It is true that teeth deprived of their pulp are often sources of local irritation which proves the exciting cause of inflammation terminating in gum-boil. This inflammation, however, may generally be discussed if proper remedies, such as the local application of cold, leeches, &c., be applied before it has progressed too far; but supposing the worst to follow, who would not endure the few days of dull heavy pain, the swollen face, and other disagreeable effects usually attending ulceration, rather than sacrifice a valuable molar, perhaps the last and main dependence for mastication, or have a front tooth extracted and its place supplied by an artificial substitute, the fastenings of which must in time destroy the rest? If members of the medical profession would learn their own ignorance of the speciality of dental surgery they would have more respect for dentists and less confidence in their own opinions upon diseases connected with the teeth.—ED. REC.

A SYNOPSIS OF DISCUSSIONS,  
AT FOURTH ANNUAL MEETING OF MISSISSIPPI VALLEY  
ASSOCIATION OF DENTAL SURGEONS.

THE Society of Dental Surgeons, of the State of New York, will hold its next regular meeting on the first Tuesday in December. This Society has now been organized a little more than one year, and most of the time, at the meetings, has been occupied in forming bye-laws, rules of order, and discussing about places for meeting and other preliminary matters of little practical importance to dentists. As those subjects are now disposed of, we would suggest to the members that it is time to come to business, and to show them what other kindred societies are doing for the promotion of the dental art, we copy the following report from the Dental Register of the West.

We propose to add a little to this discussion, and trust to the forbearance of our western brethren not to *expel* us if we should give it something more of a controversial character than it now possesses.—ED. REC.

"After the reading of Dr. B. B. Brown's paper on Hæmorrhage,\* Dr. James Taylor remarked, that he had met with several cases of protracted hæmorrhage in the course of his practice. One family in particular, in which he operated, he would notice. In it there had existed for a length of time a hæmorrhagic diathesis. An uncle of the family had died some years ago of hæmorrhage. There are seven sons in this family, but all are not subject to this malady. Four of them are predisposed to hæmorrhage, while the others are not. When any of the former had a tooth extracted, the hæmorrhage would generally cease in the common time, but in two or three days after, it would return. The effects of the various local applications, (actual cautery, styptic, and pressure, ) were tried. The hæmorrhage could thus be controlled for a time, but in ten hours the blood would again flow. This state of things would continue for about ten days, when the hæmorrhage would cease. In the interim the proper agents designed to have a constitutional effect, had been made use of, and these, combined with the diminished force of the blood, by so great a loss, doubtless had been the most efficient means in these instances in arresting the hæmorrhage.

\* Dr. B. B. Brown's essay on hæmorrhage we read with pleasure. Several interesting cases are related in it which we shall notice in a future number of the Recorder, as also the remedy which he principally relies on.

"Upon the suggestion of some member, the Doctor said it was his intention, when called upon again to extract a tooth for either of these individuals, to prepare the system by previous constitutional treatment, in order to ascertain if the danger could thus be diminished.\* In applying pressure in these cases, the Doctor did not confine it to the alveolar cavity, but he made a plate to fit the gums for some distance around it, under which he placed cotton, and this pressure, he thought, had a tendency to draw the edges of the wound together.

"Dr. Bonsall cautioned the members in the use of the oil of ergot, (mentioned by Dr. Brown,) in particular stages of female life.

"Dr. Berry advised the use of tinct. ferri muriatis, as a stypic, had used it in a recent case of several days standing, with entire success.

"During the morning session of the second day, a paper was read by Dr. Bonsall, on Pivot Teeth, which gave rise to a very amicable and interesting discussion.†

\* In the March No., Vol. 2., of the Recorder we reported a case of excessive hæmorrhage from extracting a tooth. This was a well marked case of the hæmorrhagic diathesis, and we then decided if it should ever become necessary to extract another tooth for that patient or for any other known to us to be of a similar character, we should adopt the precaution to administer prophylactics. The patient should be put upon a rigid diet of dry solid food, avoiding all drink as much as possible for several days previous to the operation. Hydrogogue cathartics should also be administered with the view of diminishing the proportion of serum in the blood. Tonics and vegetable acids are also indicated and a few hours before performing the operation a dose of opium and lead may be given. It is doubtful, however, whether a case in dental surgery can ever occur where this course would be practicable, for no patient with a severe tooth-ache would be willing to bear it while the system was being prepared for the operation. Kreosote and arsenic to an aching nerve, and poultices to an ulcerating fang, leaving the tooth in the mouth in either case, we should think better practice than extraction, if any great danger was apprehended from hæmorrhage.

† Our earliest recollections, connected with dental surgery, are of an operation performed by an itinerant quack more than twenty-five years since, in the bar-room of a country tavern, before an admiring audience, of which we had the good fortune to be one. That operation Dr. Bonsall has very accurately described, in his essay, suggesting nothing new or different from what was then and there used, and omitting nothing except the use of the hammer that gave the finishing touch to the operation, and which, through the whole reading of the essay we expected to find recommended by Dr. Bonsall. In his opinion no improvement has been made since that time. We pointed out some of the imperfections of the wood pivot and the ordinary pivot teeth, in Vol. 1, of the Dental Recorder, and described what we still think an improvement upon the old plan.

Dr. Hawes, of this city, informed us a few days since, that he had recently inserted a common porcelain pivot tooth by cementing a gold pivot into it with Levett's enamel. We have tried it in several cases since and found that with this, or with the common jeweller's enamel, the pivots may be so firmly secured in the teeth that no effort of ours can detach them. If this proves successful it will in our opinion be a very great improvement upon even Dr. Taylor's hickory.

“Dr. Griffith led the way by remarking that in inserting pivot teeth he pursued a course not pointed out in this paper, he had seventeen years ago introduced an improvement in the shape of the pivot, for which he would not say he was entitled to credit, that was for the members of the Society to decide upon. His mode of practice was, (with the exception of persons leaving the city immediately,) always to insert a temporary pivot, fitting easily so as to allow of its ready extraction. In that portion of the pivot which is lodged in the fang, he cut a small groove in one side, so as to form a canal in it to allow the discharge of pus if it formed above the pivot. In from four to fifteen days if no inflammation existed, he inserted the permanent pivot, which he formed of well seasoned hickory. The first individual he informed of his making use of this canal for the egress of pus, was Dr. Stringfellow, who, he understood, varied the practice by filing a groove in the side of the fang, instead of cutting it in the pivot. This mode he could not approve of, as he thought it weakened the root.

“Dr. James Taylor remarked that pivoting teeth was undoubtedly contrary to sound physiological principles, as it was a rule in surgery to remove every dead member. But it is a question whether the disadvantages arising from the wearing a pivot tooth, were not less than those growing out of the use of a single plate tooth. He thought that in general they were. The injuries resulting to the teeth bearing the clasps were in many instances quite serious. When but one plate tooth was needed in a mouth he advised that it be dispensed with, unless in the front of the mouth.

“Dr. Goddard stated that when applied to for the insertion of a pivot tooth, he always warned the patient that he might expect trouble from the root after the tooth was inserted, as in eight cases in ten an abscess would form. He never used a temporary pivot, but inserted the tooth permanently at once, he never formed a canal alongside his pivot for the egress of pus, and never used a pivot entirely of wood, but always gold inserted in wood, which he condensed by driving the pivot through a hole of the exact size of the drill. He had used gutta percha several times in pivoting teeth, but was not yet prepared to give an opinion on it.

“Dr. E. Taylor informed the Society that in this operation he made little use of excising forceps. For the removal of the remaining portion of a crown he prefers a very fine saw, a description of which he had given in the Register. His experience since that period, had confirmed his opinion of its advantages. He had used the wood pivot with and without the canal. When

he anticipated trouble, he made use of the cartal, has formed this sometimes by cutting off a portion of the pivot, at others has cut a groove or canal in the fang. Has used the gold incased in wood, when the pivot requires an inclination, in other cases commonly uses the hickory pivot. He has also plugged up the cavity above the point of the pivot. He has tried the gutta percha between the crown and the fang, when there has been a saucer shaped cavity surrounding the pivot and thinks it useful in such cases.

“Dr. Berry was of opinion that it was best to insert a temporary pivot. The hickory he thought strong enough when the proper kind was selected. He had used some for the last three years which his friend, Dr. James Taylor, had obliged him with, and which is certainly the best he ever used. He thought that which is best suited for pivots, should not be very flexible; but at the same time, should be equally tough with that which was. The pivot should be cut from the growth of one year, so as to avoid the porous fibre between the layers formed in consecutive years.\*

“Dr. Leslie inquired of the older members of the Society, what they had found to be the best means of *allaying* the inflammation which so frequently followed the pivoting method of inserting teeth. In his practice, he always, after inserting a pivot tooth, desired the patient to give him immediate notice should the inflammation supervene, in which case he exhibited the saline purgatives; accompanied with a local cooling application, such as—

R. Sulph. Zinc. ʒss.  
 Aquæ Font., Oj.  
 M.

“This to be applied immediately over the root, by means of three or four folds of cotton cloth, which are to be re-wet as the cloth becomes heated. This mode of treatment he had found during his own short experience, entirely successful. In every instance he was enabled to reduce the inflammation by the process of resolution.†

\* When the hickory pivot is used this is an important consideration. Trees which grow the most rapidly make the strongest wood. This is a well known fact to farmers, who always select the coarsest grained wood for whip handles, axe handles; &c. All the hickory that we have been able to obtain in New York has been fine grained and brittle and wholly unfit for pivots, while that which grows in New England is tough, strong and unyielding, like the true puritanical character.

† Our remedy of late years has been leeching and it has proved successful in almost every case where it was resorted to in the early stages of the inflammation. From one to three leeches should be applied over the inflamed part

"Dr. Curtis asked whether a fang which had once suppurated was likely to do so again, or to have an abscess formed over it should the crown be re-set. He also wished to know if an abscess ever entirely cicatrized.

"Dr. James Taylor remarked, that he had worn pivot teeth for fifteen years, and he found that the gum over the fang on which they were set, was liable to suppurate once a year, but for several years together he had prevented the formation of an abscess by the timely use of an emetic. He, however, had several times, an abscess form over the same fang, owing to his too long neglecting the usual remedies. He was not prepared to say that an abscess did ever entirely close up, he, however, had one which had not discharged for years. The Doctor stated he had made frequent use of the means spoken of by Dr. L., for allaying inflammation arising from this operation, and he was pleased to say he had done so with success. In answer to an enquiry from the chair, as to what was the proper age a tree should be when cut, and the proper season to cut it in, so as to adapt it best for pivots, the Doctor remarked that he did not consider the age of the tree, or the season it was cut in, of as much importance as the circumstances under which it was grown.— That which his friend Dr. B., had referred to, he was fully satisfied was the best hickory he had ever used. It had been selected by a friend while on a visit to the Allegheny mountains. The directions he gave him was, to go to the south side of a hill, and select a tree which was growing on a barren soil, and which was scrubby and stunted, and from it cut out a block near the root.

"Dr. Taft enquired what was the opinion of the Society regarding the cause of an abscess following the insertion of a pivot tooth. Was it the result of the operation viewed as a whole, or was it the result of a particular portion, or of several parts of the operation? Was it the destruction of the nerve, the excision of the crown, or the drilling of the fang? He thought it was the preparation of the fang.

"Dr. Goddard considered the cause of abscess to be a lodgment of foreign matter above the pivot; hence, he was very particular in removing the chips resulting from the formation of the pivot hole. He thought it very important to extract all the nerve. In his own practice he had very rarely found abscess to follow this operation.

and the bleeding promoted, after the leeches fall off, by warm water held in the mouth. The treatment of Dr. Leslie, although good is exceedingly troublesome to the patient; there is hardly one in ten, among ours, who would not sooner submit to ulceration, than saline purgatives and constant application of Sulph. Zinc to the mouth.

"Dr. Griffith thought the drill used by him well calculated to keep the cavity free from chips. The head or cutting portion was from an eighth to a quarter of an inch in length, this was formed of four square steel, (the shaft being of a less size,) the flat on each side was cut out with a half round or oval file, so that the instrument when finished had the four angles formed into four cutting surfaces. The chips escaped without difficulty by the groove thus formed on each side, he always used a syringe to clean out the cavity. In view of Dr. C.'s query, he would relate a case in which he had inserted a pivot tooth nine years ago. In this instance he made use of a temporary pivot, and directed the lady to inform him if the inflammation became serious over the fang. This she neglected, and he was not called until after an abscess had formed. After the inflammation had entirely subsided, he inserted the tooth with a permanent pivot, since which she had not suffered from that tooth. He approved of the course pursued by Dr. L., in the early stage of inflammation, but in addition advised the extraction of the pivot, and the perforation, if possible, of the foramen of the fang with a bristle, in order that if pus had formed, it might thus escape.

"Dr. McCullum approved of the plugging the fang above the point of the pivot. He had pursued the practice for years, and thought it highly beneficial.\*

\* We have never known a single instance, during a practice of fifteen years, where ulceration followed immediately after destroying a nerve and inserting a pivot tooth; but, in our practice, it has always happened, when artificial crowns have been put upon fangs which had no live nerves in them. While the nerve remains, the fang retains its perfectly healthy connection with the surrounding parts, but when this is gone, it loses a portion of its vitality, and like a foreign substance, becomes a source of irritation which a slight exciting cause may kindle into active inflammation. Thus exposure to a draft of air, or probing the root may produce it. When the root is in this condition, the operation of drilling, unless performed with the greatest care, is apt to be followed by active inflammation. To prevent this, it is necessary that the operator should be exceedingly cautious not to force any of the soft decomposing matter, of which there is always more or less in the fang, through the foramen at its extremity, as this would be a sufficient cause of inflammation. To prevent this, we always pass up a very fine elastic probe to within a short distance of the extremity of the fang; by rotating this fine instrument and gradually withdrawing it several times, most of the soft matter may be removed. The canal may then be wiped out by a little wet cotton wrapped around the same probe, and afterwards the remaining decay scraped away as high as possible. After this is done the canal may be enlarged with the common drill, using it wet and withdrawing it often, to prevent the chips from being forced upwards in the fang; when this is done, that part of the canal above the enlargement, designed for the pivot, should be filled with gold, care being taken not to force it up so as to disturb any slight portion which may be left near the foramen. Every step in the operation should be performed with the greatest care not to disturb the root by any undue force, strain or shock, our aim being to leave its connection with the periosteum in the

"A short and interesting discussion arose upon the question, "Are the teeth of the Negro less liable to decay under the same circumstances, than the teeth of the White."

"Dr. Whitney stated that his attention had been early called to the consideration of this question. He had when a student of medicine in Virginia examined it. His attention had also been given it while practising dentistry in northern New York, and lately in Tennessee, and he believed the facts would show that the teeth of the negro were more liable to decay than those of the other class, under similar circumstances. In northern New York, he thought the teeth of the negro were not so good as those he had met with in Tennessee, and certainly not as good as those of the white in New York, living on the same diet. This difference he attributed to the inability of the negro to stand the cold climate of the north.

"Dr. E. Taylor considered the difference between the two classes to be governed by the constitution of each. In the north the teeth of the white would be better than those of the black, because the northern climate was not suited to the complete development of the latter. In the south the state of things would be reversed. The impression on the public mind, that the teeth of the blacks were better than those of the whites, had its origin more in the striking contrast between the teeth and the skin, than in a knowledge of the actual state of the teeth of this class.

"Dr. Berry differed from his friend, Dr. W., in regard to the liability of the teeth of the negro to decay at the north, he believed it was too cold there six months in the year, for the process of decay to proceed.\* He thought the teeth of the black at the south just as liable to decay as those of the white. He had examined the mouths of five hundred negroes at the south, and of three hundred of these under the age of thirty years, he had not found more than twenty perfect sets of teeth. The cause of this he believed to be the amount of swine's flesh they eat. The whites although much more careful of and cleanly with their teeth, lost them by the undue use of coffee, pickles, and the

same condition which it was before the operation. By filling that portion above the pivot, we prevent decomposition and the formation of gas which always accompanies it, and which may be a sufficient cause of ulceration. If a small pustule appears, after the root has been treated in this way, it may generally be healed in a short time, by frictions over the part with a stiff dry tooth brush.

\* This is a most wise conclusion! although at first not apparent to the physiologist who reflects that the animal temperature is the same in all climates; nor can we reconcile the Doctor's *belief* with this stubborn fact, except on the supposition that the constant "grinning" of the negro lets in a sufficient quantity of the north wind to arrest the process of decomposition.

like, which were more injurious to the teeth than the swine's flesh, and altogether unfit for the food of man. He said he had never examined the teeth of the mulatto, a race which should never have been allowed to exist on the face of God's earth, but he should infer that they must be worse than either of the other classes.

"Dr. Griffith remarked that he had practised in Virginia, Georgia, and Kentucky, in the whole some nineteen years. His conviction, formed on that experience, is, that the teeth of the blacks were not constitutionally better than those of the whites. The reason their teeth decay as much as they do, with their generally simple diet, must be charged to their careless habits—few of them ever carrying a toothpick.

"Dr. Whitney objected to the position of Dr. Berry, regarding the effect of animal diet, and cited the use made of meat by the aborigines of this country, coupled with the perfect state of their teeth, as proof of its incorrectness."

A. M. L.

## ELECTRO-MAGNETISM IN ADONTALGIA NERVOSA.

(*Neuralgia of the Teeth.*)

BY DR. R. A. CHAMBERS, OF MIFFLIN CO., PENN.

"This troublesome disease, which is *generally* characterised by periodical pains, shooting with the utmost violence along the branches of the *fifth* pair of nerves distributed to the affected jaw, I have succeeded in arresting and entirely curing in two cases. Both patients had been troubled for *years*, and suffered much from the intenseness of pain which attacked them at stated periods, and continued for several hours, after which there was not the slightest symptoms for some three or four days, when it would make its appearance with the same distressing effects. Various applications, as well as internal remedies, had been resorted to, but all to no purpose, as little or no benefit had resulted from their use. The poles of an Electro-Magnetic apparatus were ordered to be applied to the jaw, tracing as near as possible the distribution of the nerves. This was done; and after *two* applications in the one case, and *three* in the other, I had the pleasure of witnessing a cure, as no returning symptoms have made their appearance during the several months which have now elapsed."—*N. Y. Annalist.*

BELLEVILLE, Sept. 25th, 1848.

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# NEW YORK DENTAL RECORDER.

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DECEMBER 1, 1848.

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## DENTISTS' FEES.

There is perhaps no business, either professional or purely mechanical, transacted in our city, in which the charges, for services rendered, vary so much as those of practising dentists. The following lists of prices, which have been handed to us, will show the fees which some are receiving for daily operations :

|   |   |   |   |                |
|---|---|---|---|----------------|
| Natural teeth set on the fangs,             | - | - | - | \$ 10.         |
| Composition “ “                             | - | - | - | - 10.          |
| Artificial “ “                              | - | - | - | - 5.           |
| Cutting out decay and filling with gold,    | - | - | - | - 5.           |
| Removing the nerve and filling with gold,   | - | - | - | - 10.          |
| Cleaning the teeth,                         | - | - | - | - 5.           |
| Separating two teeth with the file,         | - | - | - | - 2.           |
| Extracting a tooth,                         | - | - | - | - 1.           |
| Remedying Irregularities of the teeth, from | - | - | - | - 10 to 50.    |
| Treating Diseases of the gums, from         | - | - | - | - 10 to 30.    |
| <hr/>                                       |   |   |   |                |
| Teeth on gold plate, from                   | - | - | - | - 2 to 4.      |
| “ silver “                                  | - | - | - | - 1 to 2.      |
| “ pivot “                                   | - | - | - | - ,75 to 1,25. |
| Filling with gold, from                     | - | - | - | - ,50 to 1,00. |
| “ “ cement,                                 | - | - | - | - ,50          |
| “ “ tin or silver,                          | - | - | - | - ,50          |
| Cleaning teeth,                             | - | - | - | - ,50 to 1,00. |
| Separating “                                | - | - | - | - ,50 to 1,00. |
| Curing toothache, or extracting tooth,      | - | - | - | - ,50          |

The above charges, it is believed, embrace the extremes for all the common operations which are performed. We do occasionally hear of dentists charging much higher, as for instance, \$25 for pivot teeth; \$20 or more for filling a tooth, and we have heard of six or eight hundred dollars being asked, if not paid, for a double set; but these are very uncommon operations or gross extortions practised by consummate villains. We have another list of prices which range about midway between those already given, and this is probably about the average among the mass of dentists in our city. Two and three dollars is the most common fee for filling a tooth; from three to five for inserting on pivot; from five to ten for plate teeth; two and three for scaling, &c.

On many accounts it would be much better for the dentists and their patients, if more uniformity existed in the amount of the fees charged. Of course those old and experienced dentists who have long had the confidence of the public, must be expected to charge and to receive more for operating than the younger aspirants for public favor. Many persons desiring operations on their teeth, who are unacquainted with the nature of those operations, and therefore incapable of discriminating between good and bad work, are in the habit of "shopping" about the city to see where they can find the cheapest dentist. This encourages many to underbid those who have fixed a price for the work; these, in turn, are underbid by others, and so on until the fortunate, (we mean unfortunate) one who finally secures the patient, is compelled to do the work at a price far below what an honest skillful dental surgeon should receive as a fair remuneration for services faithfully rendered. We are supposing that the patient is fortunate enough to fall into the hands of a faithful and competent operator, which is not often the case, for, generally speaking, those who work for the lowest price are the poorest workmen; there are some however, young men and well educated in their profession, who aim high, and anticipate ere long to be able to command the highest fees, but who, nevertheless, for the want of present employment, will sooner compete with the very dregs of the profession than suffer a person to leave their office without serving him. They reason to themselves that it is better to work for a price below their own standard than to sit idle; but every such operation has the direct tendency to lower their standard of prices; for the patient on leaving is sure to tell his friends and acquaintances how very low he had his work done, and to recommend the one who did it as a *cheap dentist*. Of course he must operate for all those who come by such a recommendation for the same fee which he received from the first, or not operate at all; and by so doing he is in fact perpetuating a system of low prices, which will in the end make him a low and miserable operator, for no man can long have the heart to do good work unless he receives a fair remuneration for it.

As a general rule, it is better to fix upon a high fee for our services, endeavoring to make the work in quality, come fully up to the price. By so doing, we have a constant incentive to improvement. Of course there will be some exceptions. "Necessity knows no law;" but those who can live and sustain a liberal scale of prices for their operations, although it be in poverty for a few years, it is believed will find it to their advantage in the end. We speak only of charges to those who are able to

pay well. "The poor we have always with us," and the law of benevolence is equally binding on all to the extent of their ability.

It is often said, by those unacquainted with the nature of good dental operations, that dentists are better paid than other professions or trades, requiring an equal amount of talent and learning. This may have been true at a time when competition was less than at present; but we are mistaken if most of those now in practice do not find, when age unfits them for farther labor, that the golden harvest, which in youth they had hoped to reap, has eluded their grasp, and proved but barely sufficient to sustain them through the winter of life.

This is a subject which claims the attention of every dental surgeon in the land, and especially those who are located in large cities, where the competition is greatest. In almost all the trades and professions in our city, there is fixed a minimum scale of prices for services rendered, below which it is considered disreputable to charge. Such a tariff of prices is of mutual benefit to the employed and the employer. If such a plan were adopted by the dental surgeons, each could at all times command a fair compensation for his skill and labor. The miserable practice of shopping about from one dentist to another would soon stop, when the enquirer found that he received from all the same uniform answer. Persons desiring operations would then enquire for the best dentist and not the cheapest, and of course would be better served. At the same time the poorer class of dentists would not be the sufferers by such an arrangement, for if they had less work to do, they would receive for it better pay, which is the most direct stimulus to improvement. The skillful and scientific charging higher than the minimum scale for their services, would, as now, allow those persons who are always desirous to employ the cheapest, to find the poorest also.

We commend this subject to the Society of Dental Surgeons of the State of New York, and hope that at a suitable time, they will take it up and act upon it. The Virginia Society of Surgeon Dentists, in 1842, recommended to the profession the following scale as the minimum and maximum of dental charges:

|                              |   |   |   |   |               |
|------------------------------|---|---|---|---|---------------|
| For plugging, from           | - | - | - | - | \$ 1 00—5 00  |
| For extracting, from         | - | - | - | - | — 1 00        |
| For separating, from         | - | - | - | - | 50—1 00       |
| For scaling, from            | - | - | - | - | 2 50—5 00     |
| For inserting on pivot, from | - | - | - | - | 4 00—7 00     |
| For inserting on plate, from | - | - | - | - | 7 00—12 00    |
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# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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No. 4.

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## LETTER FROM DR. W. H. ELLIOTT

MY DEAR DOCTOR.—I was somewhat surprised on looking over the October number of the Recorder to find my File Carrier published as the invention of Mr. Chevalier.

During the month of September, 1847, I invented the File Carrier and sent Mr. C. a drawing of it exactly as you have it in the Recorder, with the exception that the button of my instrument was held against the end of the file by a spring instead of a screw. I had some difficulty in making Mr. Chevalier understand how I wished the handle to be finished, so that three were made before one was completed to my mind, all being exactly alike in the essential points; during the time Mr. C. was making these three instruments I received from him two letters, which bear ample evidence that *I am*, and that *he is not*, the inventor of the File Carrier.

Mr. Chevalier afterwards, (as he told a friend of mine,) altered it to the form in which you have given it to the profession, *without in the slightest degree changing its principles*.

The two great points in which my invention differs from all others, and which at the same time, according to your own showing, makes it superior to all others, are these: 1st. The jaws of my instrument are set off from that part of the frame which runs parallel with the handle, but set off from the handle for the purpose of admitting the cheek. This makes the instrument applicable to either side of either jaw with equal facility. 2d. The file is held between two concave buttons with grooves cut across them in all directions, so as to hold the file at any required angle upon the tooth—*Two objects that were never before accomplished in any file carrier. These two principles I claim as my invention*, and I must be allowed to call upon you to say whether they are my right or not. And since you have told the profession that Mr. Chevalier's instrument possesses these two great essential qualities, and have virtually denied that they exist in mine, by calling it a modification, though not an improvement, upon Dr. Westcott's, would it be more than fair for you to publish the inclosed

drawing of my File Carrier. I send you also the instrument itself, that you may see whether the drawing be a correct one. I can only account for your mistake in calling it a modification of Dr. Westcott's by supposing that you have not seen mine, for that part of Dr. W.'s instrument which you say constitutes the similarity, does not exist in mine at all. The curve in one of the jaws of my instrument is objected to on account of its increasing the width of the frame. This objection may be removed by making it as represented by the dotted lines; or, the frame may be made without any elasticity, and the file held in its place by throwing one button towards the other by means of a little screw upon the back of it passing through the end of the jaw. Or again, the file may be held by drawing the whole jaw backwards instead of the button as Mr. Chevalier has it; or still again, the jaw nearest the handle may be made to slide upon the back of the frame, and by giving the other jaw a slight elasticity the file would be held with great firmness. And so on, I might mention any number of methods of holding the button against the file, all of which have their advantages and disadvantages, *but they do not in the slightest degree effect the great objects gained by my original invention*, which have already been mentioned, *and which ALONE gives this instrument its superiority over all others.*

By using the spring, simplicity and firmness are gained; firmness, because the jarring of a file does not, under the same amount of pressure, release it as readily from the grasp of a spring as from that of a screw. This I know by experience, having used an instrument which held a file by the pressure of a screw upon its ends, for several years. The frame is composed of a single piece of metal and though it may be broken it cannot otherwise get out of order.

The screw, on the contrary, has the advantage of admitting files of a greater variation in length. But these differences do not effect the question whether I am, or not, the inventor of the instrument which, *without changing its parts*, applies with the same facility to *either side of either jaw*, and at the same time presents the file to the tooth *at any required angle.*

Fig. 1 represents the instrument invented by myself, and manufactured by Mr. Chevalier from my drawings and model, Oct. 1847. To use Mr. Chevalier's language to me, in a letter dated Nov. 22d, 1847, "the instrument is exactly like your drawing, and the spring full as stout as the brass model."

Fig. 1.

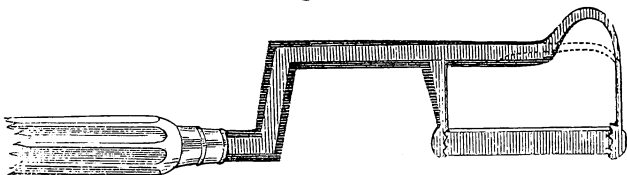
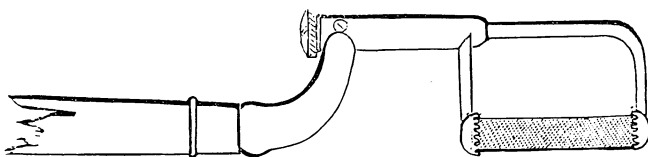


Fig 2 represents the instrument published as Mr. Chevalier's invention.

Fig. 2.



The cut below, (Fig. 3,) represents a file-carrier that I have used occasionally for several years, for the purpose of separating the incisors and bicuspid. The two long jaws (*a a*) spring together upon the file, forming a smooth back for the protection of the lip, and at the same time enable the operator to use great lateral force upon the file without danger of breaking it. With this instrument the space may be made very wide on the back of the teeth while it scarcely appears in front; (*b*) a screw which brings the jaws together. One of the jaws is attached to the shank of the instrument, the other is detached and only held in its place by the screw *b*.

Fig. 3.



By reference to the handle of the instrument you will see the method I have adopted latterly in the construction of my handles. A thick silver ferule is soldered to the shank at *c*, into which the ivory is fitted snugly, and is supported at the other end by the screw *d*. The shank of the instrument being smaller than the hole in the handle, does not come in contact with the ivory at all, and thus effectually prevents it from checking by giving it room to shrink, and, at the same time, has the advantage of being easily taken to pieces.

With high sentiments of esteem,

I am sincerely and truly yours,

W. H. ELLIOTT.

Montreal, Dec. 6th, 1848.

#### REMARKS UPON THE ABOVE.

In Dr. Hawes' communication Mr. Chevalier is called the inventor of the file-carrier there represented, but in the editorial remarks which follow it, we intended to give the true history of the improvements which have been made upon the file-carrier in general use among dentists, by Dr. Westcott, Dr. Elliott, and Mr. Chevalier.

The old fashioned file-carrier, as all who are familiar with it will recollect, had three screws and a detached part which turned round to

make the instrument applicable to either side of the mouth. To get rid of all these movable fixtures, Dr. Westcott simplified it as we described after stating that "the first file-carrier in which the files were confined and held in by their extremities was invented by Dr. Westcott." This was an important principle which we called an invention. This principle is adopted by Dr. Elliott in his concave grooved buttons, which we gave him credit for and which we consider a decided improvement upon Dr. Westcott's square mortices, inasmuch as they enable the operator to place the file on any desired angle, and furnish a protection to the tongue. This instrument is also applicable to both sides of the mouth, while Dr. Westcott's required a pair.

If we did not dwell sufficiently upon this improvement it was because we thought its benefits would be at once apparent to all our readers. Dr. Elliott's file-carrier is a very simple, convenient and beautiful instrument, but, in our opinion, the alteration indicated by the dotted line, would make it still better. If we understand the matter rightly, Mr. Chevalier only claims the addition of the screw and slide, which make it applicable to files differing in length. Whether this be an improvement or not, dentists will find either instrument far more convenient than the old fashioned clumsy one, and considerably cheaper.

When speaking or writing upon the subject of inventions or improvements, either in dental instruments or methods of operating, we always aim to give credit to whom credit is due. This is the only reward which members of a liberal profession, bound together for mutual improvement, should ever require, and to this they are justly entitled.—ED. REC.

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#### AMERICAN SOCIETY OF DENTAL SURGEONS.

Numerous enquiries from correspondents and others have been made of us relating to the proceedings of the American Society of Dental Surgeons, at its annual meeting held at Saratoga, August, 1848. We can say that we have been patiently waiting for the American Journal, which was due the first of October, but which, up to the time of our going to press, has not been received, when that comes to hand, if it contains a report of the proceedings of the society, as it has heretofore, we shall give it a notice in the Recorder. The following, communicated for the Boston Medical and Surgical Journal

is all that we have seen upon the subject, although we learn, from verbal reports, that the "*dissecting knife*" has not had the effect to restore entire harmony among the members.—ED. REC.

"The ninth annual meeting of the American Society of Dental Surgeons, took place at Saratoga Springs, on Tuesday, August 1st, and closed its session on Friday of the same week.

The Association convened under more favorable auspices, than at any former period of its history. It has lately been subjected to a liberal use of the *dissecting knife*, by which means a series of obstacles are effectually removed, which have heretofore interposed between it and that complete success anticipated by its original founders. Judging from the character of the convention under consideration, there are evidences which indicate that all of these expectations are now more than realized.

When members of a benevolent and scientific association meet together from all parts of the Union, and with a liberal hand, regardless of age, or the toils of success, display to the world all the principles of their art, and the whole result of their experience; when mind comes in contact with mind, and intelligent experience on the one hand, responds to a kindred disposition on the other, and all is tempered with the spirit of kindness, and an honest desire for the general good; success is just as legitimate a result, and just as certain to ensue, as the ultimate triumph of truth itself. Such have been the character and spirit of the late convention at Saratoga, and their reward is already changing its position from the prospective to the present.

Aside from the time usually allotted to the reading of dissertations, addresses, and the ordinary business of the Society, two days were exclusively devoted to oral discussions, and comparison of notes on practice.

Dr. E. Parmly, of New York, was re-elected President of the Society; Dr. J. A. Cleavland, of Charleston, S. C., was elected 1st Vice President; Dr. Alexander Nelson, of Albany, N. Y., 2d Vice President; Dr. E. Noyes, of Baltimore, 3d Vice President; Dr. A. Westcott, of Syracuse, N. Y., Recording Secretary; Dr. J. B. Rich, of New York, Corresponding Secretary; Dr. J. H. Foster, of New York, Librarian; and Dr. E. J. Dunning, of New York, Treasurer.

Dr. C. A. Harris of Baltimore, Dr. A. Westcott of Syracuse, N. Y., and Dr. W. H. Dwinelle of Cazenovia, N. Y., were appointed editors of the American Journal of Dental Science.

The Convention adjourned, to meet again at Saratoga Springs on the first Tuesday of August, 1849."

W. H. D.

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## ON THE INHALATION OF CHLOROFORM, &amp;c.

By J. ROBINSON, Esq., London.

"A correspondent, in *The Lancet*, "wishes to be informed as to the largest quantity of chloroform inhaled at one time, and the longest period a patient has been kept fully under its influence when being operated on, and whether any ill effects followed its exhibition."

Having administered this agent in a large number of cases, for our operating surgeons, I select the following from the many, as the result of my own experience.

For the removal of the breast of a female, about thirty years of age, operated on by Mr. Wade, the patient inhaled four drachms of the chloroform, and was kept fully under its influence for a quarter of an hour, including the dressing, &c. Its exhibition was followed by slight vomiting only. The patient has recovered.

In the case of a young lady, of a highly nervous temperment, twenty-two years of age, a patient under the care of Dr. Roots, consulted me in reference to her teeth, and from whom I deemed it necessary to remove fourteen teeth and stumps, independently of excising the edge of the alveolar process, for the purpose of hastening the process of absorption, for the introduction of a temporary substitute. She inhaled four drachms and a half of the chloroform, but experienced no nausea or unpleasant effect further than a few hours debility, consequent upon taking a powerful stimulus.

In the case of a private patient of Mr. Morton, of University Hospital, a gentleman had suffered for years with an irritable stricture of the urethra, of the most obstinate character, and so exquisitely sensitive was he to the introduction of a catheter, that it was deemed advisable to have recourse to the anæsthetic agent. I administered the chloroform to the extent of five drachms, and he was under its full influence for three quarters of an hour. The patient afterwards called upon me, and expressed himself as not having suffered the least inconvenience in his general health, but that he had been perfectly cured by the operation.

In a recent operation at the Royal Free Hospital, for the removal of the ramus of the inferior maxillary bone, by Mr. Thomas Wakley, I administered the chloroform to a young man, apparently twenty-five years of age, of a robust and plethoric habit, who inhaled six drachms of the agent during the operation and its completion, keeping him perfectly quiescent during the entire period, and until he had been removed to his ward. In this case, violent vomiting followed the completion of the operation, through the mistaken kindness of the hospital nurse, who had, an hour previously, furnished him with his usual meal of meat and porter, in contradiction to the expressed orders of the surgeon. This patient also experienced no ill effects from the quantity inhaled, but is discharged from the hospital, cured."

## REMARKS UPON THE PRECEDING.

The same number of the *Lancet*, from which the preceding article is taken, contains an account of the death of Mr. Badger, who died in the "surgery" of the writer of this article, according to the verdict of the coroner's jury, "from the mortal effects produced by the inhalation of chloroform upon a heart extensively diseased, and greatly obstructed in its action by a liver much enlarged beyond its natural size." (See *Dental Recorder*, Vol. 3d, No. 1.) Dr. Waters, who was immediately called in, testified that "the body was that of a fine, stout young man." To the dentist he was to all appearance perfectly healthy, and Mr. Robinson probably administered the chloroform with as little expectation that it would be followed by a dangerous or fatal result, as in either of the above cases, and yet he had not inhaled the vapor one minute before he was a dead man.

No person can read the account of this case without being strongly impressed with the danger attending the administration of chloroform in every case where the patient has not been previously examined by auscultation; and when we reflect upon the common and reckless manner in which it has been given by dentists, many of whom are wholly ignorant of the symptoms and nature of diseases of the thoracic and abdominal viscera, we are surprised that there have not been more fatal cases. This patient probably died from syncope, from which he might have recovered had not the free action of the heart been greatly impeded by an enlarged liver. Several cases of faintness have occurred within our knowledge, in some of which there was apparently a complete cessation of the heart's action, and from which the patient was, with the greatest difficulty, restored. We hope to be able to report a case of this kind in our next. In our own practice we have discontinued the use of chloroform, unless in cases where the patient's attending physician is present, or certifies that it may be given with impunity. We have published all which we have seen, of any particular interest to dentists, both for and against its use in dental surgery; but still think the extraction of a single tooth, under ordinary circumstances, is not a surgical operation of sufficient importance to warrant the trouble and inconvenience of administering even a glass of brandy and water.—ED. REC.

## EMPLOYMENT OF GUTTA PERCHA FOR ARTIFICIAL PALATE.

A correspondent says,—

"I have found the substance, gutta percha, suitable for making artificial palates, very easily moulded on a cast of the mouth into the necessary shape, and retaining its firmness and smoothness unimpaired by the temperature to which it is there subjected. Kneaded out into a smooth sheet, about the thickness of a sixpence or a shilling, and pressed into the proper form,—the edges accurately following the sinuosities of the teeth, and a hooked process or two of the same material adjusted in the usual way,—it will be found to answer very well, being smooth, light, and firm. If required, a slight rim of gold, fitted to a few of the teeth, may be fixed to the edge of the gutta percha. If care be used to mould the material equally and smoothly, it will be more agreeable in the mouth than a metallic body. When the Schneiderian membrane is too tender to permit the use of the sponge and plate,—a period with some patients of long duration,—this simple, cheap, and effective instrument will be found valuable. It may supersede the use of the soft crumb of bread, soaked drossils of soft lint, &c., which are used as temporary expedients to close the orifice in cases where bones are coming or have recently come away. But even when the membrane has become firm, a palate of this material—with or without a piece of prepared caoutchouc adherent to the upper part of the gutta percha, so as to press into the exact shape of the orifice, and form a sort of air-tight valve—will be as agreeable to most patients as the instrument commonly employed.

"Its advantages are, its cheapness, lightness, and absence of unpleasant taste or feeling. For poor patients, who are usually prevented, by the expense of gold or platinum palates, from obtaining relief, I hope gutta percha will be made available.

"In cases of congenital deficiency, fissure of the palate, &c., I think considerable relief might be afforded by attaching to a hard palate of the gutta percha an artificial soft one, of prepared caoutchouc. The caoutchouc adheres easily and permanently to the warm gutta percha, and if properly prepared, and of a suitable flexibility, thickness, and shape, it might, I should think, very materially aid the great numbers of persons who suffer from this distressing deformity. The expense, at any rate, need not henceforth prevent any one from seeking relief.

"The soft palate I have not tried; for an artificial hard one I have found the gutta percha practically useful. Whether it may resist the action of the fluids of the mouth for any length of time remains to be seen. If so, I cannot see any objection to the employment of this substance for the purpose named. In the hope that it will be fully tested, and that it may, perhaps, relieve some suffering, I offer the hint to the professional public through your columns."—*London Lancet*.

## PLUGGING, OR STOPPING TEETH.

The following article on plugging teeth is taken from a lecture on Dental Surgery, delivered at the Middlesex Hospital School, by John Tomes, Surgeon Dentist to the hospital; and published in the London Medical Gazette and the American Journal of Dental Science.—  
ED. REC.

"A well-stopped tooth, if the operation has not been too long postponed, is perfectly restored to its former durability and usefulness. I removed last year, from an old man, a molar tooth that had been plugged for thirty years, and had been serviceable till within the last two years, when it became loose from absorption of the socket. You will often see teeth that have been stopped ten and twenty years.

"Seeing, then, that so much may be gained by this operation in preserving the teeth, you cannot give too much attention to its practice; for while it is among the most useful, it is the most difficult operation the dentist has to perform. This operation is divided into two parts; the preparation of the cavity for the reception of the plug, and the insertion of the plug. In the preparation of the cavity two points must be gained, otherwise the subsequent steps of the operation will be ineffective.

"The first of these is to completely remove all the softened dentine; the second, to get a firm and regular orifice, of sufficient size as to enable the plug to be inserted, and at the same time not too large. If the cavity be large and the opening small, it will be almost impossible to make the plug solid in those parts of the cavity which are overhung; and, on the other hand, if the opening be large and the cavity small and rounded at the bottom, like a saucer, the plug will not be retained. The best form of cavity has a circular orifice with perpendicular walls; in fact, cylindrical.

"The situation of the disease must regulate our manner of proceeding. If the cavity be situated in the opposed side of a molar, the tooth must be cut away with a sculper or graver till an excavating instrument can be used. If the sides of the front teeth are affected, a piece of vulcanized caoutchouc should be straightened tight, and then introduced between the teeth; this, in endeavoring to regain its former figure, will separate the teeth sufficiently for the operator. When the masticating surface of a tooth is carious there is no difficulty in the operation; if the extent of the disease be slight, it may be removed by a broach of proper size. Having reduced the cavity, as nearly as attainable to the conditions I have described, the chips must be washed out and the cavity wiped dry with cottonwool, and the plug inserted. In making the plug, our aim must be to so perfectly fill the cavity that all moisture shall be excluded, and that it shall be sufficiently hard to resist, equally with the tooth, the wear of mastication.

tion. Unless these two conditions are fulfilled, our work will be imperfect, and ultimately fail.

"Gold or tin foil are the best materials for making plugs. Which-ever of these be chosen, the method of use is the same.

"There are three methods of introducing foil for making a plug. In one the metal is folded into narrow strips, proportioned in width and thickness to the size of the cavity. One end of the strip is, by means of a conveniently shaped stopping instrument, pressed to the bottom of the cavity. The strip is then bent, and a fold passed to the bottom of the hole, leaving the first fold projecting above the surface. Fold after fold is introduced till the cavity is tolerably full. A wedge-shaped instrument is then introduced, and the gold pressed towards the walls of the cavity; more gold is, by a similar process, pressed into the cavity so obtained. This process is repeated till the wedge cannot be forced into the plug. A flattened instrument is then used to compress the gold in the cavity. When we can make no further effect on the surface of the plug by compression, the surface is filed smooth and burnished. By a careful adherence to this plan, we make a plug composed of layers of metal arranged parallel to the walls of the cavity, and therefore not liable to fall to pieces or come out. But, on the other hand, had we made the folds at a right angle to the walls, and parallel to the bottom of the cavity, layer after layer would have peeled off till little or none of the plug remained, and the decay would have proceeded to destroy the tooth.

"In the second method, a piece of foil of sufficient size is rolled hard, and spherical between the thumb and finger. This is gradually forced into the cavity, care being taken to get it well in round the outer walls. When the plug has been rendered as solid as possible, the superfluous portion is cut or filed off, and the surface burnished.

"The third method of using metallic foil is a combination of the two preceding ones. A piece of foil is rolled up loosely that will readily go into the cavity. When in its place a wedge-shape instrument is passed into its centre, which has the effect of spreading the gold towards the walls of the cavity. The centre is gradually filled with folds of gold in the manner I have described. The wedge is used again and again till it can no longer be made to enter. The gold is then compressed on the surface, and the superfluous portions removed, and the surface burnished. When the plug is finished in either of the manners I have described, the circumference should be examined by a sharp steel probe. If this can be made to enter at any part, the hole so made should be enlarged by thrusting in an instrument as large as can be introduced, and the hole filled.

"Either of the foregoing methods of plugging will answer, if well done. But of these I prefer introducing the metal in folds. The situation of the cavity, and also the size, will have something to do with the selection of the plan of operating. Then, again, one person will be more apt at one manner of procedure than at another. All

these matters of detail must be learned in practice. I should exhaust your patience, and greatly exceed my limits, were I to attempt to describe every variety in form and situation of cavity, and every modification and plan useful in plugging.

"Where the cavity of a tooth is so large that the walls are too thin to bear the pressure necessary to the insertion of a gold or tin foil plug, the amalgam of silver or of palladium may be advantageously used. Having prepared the cavity as for the use of foil, a little mercury is triturated in a glass mortar with a small quantity of precipitated silver or palladium, till they unite and form a paste, which is well squeezed in a piece of wash leather to force out as much as possible of the mercury. The paste is then again rubbed in the mortar, or in the palm of the hand, and then introduced into the cavity. The cavity, however, must be first well dried with lint, and care must be taken to get the amalgam in close contact with the whole circumference of the cavity.

"The plug so formed hardens in the course of a few hours, after which the surface should be well burnished. The American dentists condemn this kind of plug, as it seems to me, somewhat unjustly. It is undoubtedly far inferior to either the gold or tin foil plug, but it can be used where they cannot, and it is surely better than none. I have seen a mere shell of a tooth, that would have broken away on the first attempt at introducing foil, rendered useful for years by an amalgam plug.

"Before leaving the subject let me warn you that unless the cavity be well prepared by the total removal of the softened dentine from the walls, and by getting a good, firm, and well-shaped orifice, free from acute angles, no plug will answer, and least of all the amalgam. It will fall out or become loose within twelve or eighteen months, and frequently in much less time, and decay will proceed. Teeth plugged with silver amalgam usually become stained of a deep blue-black color. When the palladium amalgam is used there is little or no staining, if the excavation be perfect. The latter amalgam is therefore preferable."

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### DENTAL CARIES.

"The fact that caries of the teeth is the product of the direct action of some chemical agent, would seem to be manifest from the fact above stated ; that a necrosed tooth, or one deprived entirely of all vital properties, is apt to become carious and decomposed as a living one. To say that good, perfect, healthy teeth must accompany a good constitution, would be to contradict every day's observation, and the experience of all who have ever paid even slight attention to the teeth. Every man with a good constitution has not necessarily good teeth ; nor has every man with a depraved habit of body consequently a bad denture. As the teeth are possessed of no intrinsic, restorative

power, it would of course follow, if such were the case, that a man's teeth would be the sufferers from all the accumulated disease he had undergone up to any given age; and the attempt of the dentist to save a carious tooth from further disease would be utterly futile. Happy is it, that experience contradicts this theory, by showing that a tooth properly filled with gold may be placed beyond the reach of those agents which had previously acted upon it.

"It has been satisfactorily proved, that any acid, whether free or in combination, with some base for which it has less affinity than it has for the alkaline constituents of the teeth, will produce in the teeth the phenomena of the affection we designate caries; and the same treatment, namely, to remove the decomposed part and fill up the cavity with gold, is always successful in saving the tooth. It has been said that the carious matter from a tooth will redden litmus paper;—this proves that a chemical agent, an acid, is present in the mouth, sufficient to produce this destruction. Again, this disease never attacks those parts which are kept perfectly clean—but is found on the lateral surfaces between the teeth, or in some depression or place where foreign substances have been allowed to accumulate and remain, by the decomposition of which an acid is generated: this acid is the cause of the mischief, and commences its work of destruction upon the part of the tooth where it is formed, by dissolving its lime; and when this acid is generated between two of these organs, both are generally affected alike; and, indeed, this is where it is most commonly found, for the simple reason that these surfaces are not so easily reached by the brush and other means for the prevention of decay, as the palatine and buccal sides. Those persons who remove daily all the accumulations of saliva and food from between the teeth by using the brush, floss silk, &c., and pay particular attention to cleanliness in these organs, never have them thus affected, except in those parts which cannot be reached, as the fissures upon the grinding surfaces of the molars and bicusps, which often dip down through the enamel."

The above exposition of the chemical theory of caries of the teeth is taken from a thesis, by Mr. Charles Bond, a candidate for the degree of Doctor of Dental Surgery in the Baltimore College, published in the Dental Intelligencer.\* Although this theory is now generally adopted by writers on dental science in this country, we must confess that we are by no means satisfied with it. If this acid were mixed with the saliva or mucus which lubricates the mouth, it would

\*We stated in the November No. of the Recorder that the Intelligencer had been suspended since last March, from the fact that we had not received it, neither had any been sent to the New York store of the publisher, nor, as we learn from thence, to any of the New York subscribers. Since then the Sept. No. has come to hand; the May and July numbers we have not seen.

attack every part of the surfaces of the teeth that it came in contact with ; we should have a gradual wasting or thinning of the enamel until it was wholly removed, and the tooth bone, or the cementum, if it exist under the enamel, left entirely denuded. This in turn would be attacked until the whole was dissolved and removed in successive layers, commencing on the surface. But teeth never decay in this way, even where the fluids of the mouth by tests are proved to contain free acids. This is not because the friction of the tongue, or lips, or the act of mastication removes this acid and keeps the surfaces so exposed, completely cleansed, for the more free the surface of the teeth from foreign substance, the better chance would the acid have to act upon the lime contained in the enamel.

But, say the advocates of this theory, particles of food taken into the mouth being confined in contact with the teeth, within the fissures of the molars, and between the approximal sides of the bicusped and incisors, exposed to heat and moisture, gradually decompose, fermentation commences, and an acid is formed which slowly but surely dissolves the lime in that particular spot where the acid remains. This is all well thus far, but the laws of chemistry are immutable ; lime in combination with an acid for which it has a feeble affinity, will always give itself up to another for which it has a stronger affinity. Accordingly we find that the tooth of an aged person, which has resisted for three score years all this fermentative process, if exposed to the action of an acid is decomposed as readily and as rapidly as one in a carious state just taken from a youth only ten years of age. If the chemical theory be correct, then we should expect all teeth which were crowded together, thereby affording greater facilities for securely holding foreign substances between them, especially if not thoroughly and frequently cleansed, would be the first to decay ; but facts do not prove it to be so. The strongest and most durable sets of teeth are often crowded together in the most irregular manner, while those which are perfectly regular and symmetrical in arrangement, scarcely crowding at all upon each other, are the first to decay ; and this often happens when the former are entirely neglected and the latter cleaned with rigid regularity and care. Those teeth, however, which are, from their imperfect formation, predisposed to decay, generally begin first in the fissures between the cusps upon the grinding surfaces, and on

their lateral surfaces where they are the most crowded together, and of course most exposed to wear from the constant friction of one against the other.

The preliminary step to the commencement of caries is, therefore, in all probability, purely mechanical; the fracturing of the enamel, either by the attrition of one tooth upon another, by too great violence in masticating hard substances, or, it may be, by defects in the enamel, produced in any other way. We do not believe that any acid contained in the fluids of the mouth, or produced by decomposition of those fluids or the remains of nutritive matter, is sufficiently powerful to decompose the enamel. That it may do it, when confined in contact with the enamel for any length of time under favorable circumstances, as shown by the experiments of Prof. Westcott, is highly probable; but in an active mouth where it is constantly diluted by fresh supplies of saliva, and continually disturbed by the motion of one tooth upon another, it is not probable that it can ever produce this effect.

Prof. Harris, in his *Principles and Practice of Dental Surgery*, has the following assertion:—"It is well known, that the fluids of the mouth, especially the mucous, when in a vitiated condition, are capable of decomposing the enamel of the teeth when not possessed of more than ordinary density."

He endeavors to prove this by the fact that dead teeth, blocks of the tooth of the Hippopotamus, ivory, or the crowns of natural teeth, when used as substitutes for the natural organs, are as liable to decay as living teeth, and in both, the decayed part presents the same characteristics. This is true, but in neither does the decay attack the enamel. In all these cases decay commences where the bone of the tooth is exposed, and as it gradually undermines the enamel that substance crumbles away but is not decomposed by the acids.\*

The enamel being fractured so as to admit foreign substances to come in contact with the bone of the tooth, caries commences. Although Dr. Harris thinks that it sometimes commences on the enamel,

\* In a few cases we have known the enamel upon the lateral surfaces of the teeth to be decomposed around a gold filling, the decay gradually extending, while the filling remained perfect; but these cases are so rare and so different from the ordinary caries of the teeth that we have supposed that they depended upon some specific cause. If this effect had been produced by the fluids of the mouth, it would not have been confined to the edges of the filling but would equally extend to other parts and other teeth. May it not be caused by Galvanism?

he admits that it is most frequently upon the bone, where from some cause the enamel is so fractured as to admit the juices of the mouth to find ready access to the osseous tissue. What now is the first step in the progress of the disease? From the analogy that exists between the decay of dead teeth in the mouth and those which still possess a living nerve, we are led to believe that the tooth bone when deprived of its natural covering, which is (on the crown) the enamel, soon loses its vitality at that point. The vital principle being extinct the tooth immediately comes under the control of chemical laws when, if the circumstances favor decomposition, this process gradually goes on until the whold structure is destroyed. The same chemical agents which most facilitate the rapid decomposition of vegetable substances, also cause the decay of the teeth. These are a certain degree of heat and moisture, aided generally by air. A temperature from 60 to 100° is the most favorable and if the air be somewhat confined, the process goes on more rapidly than when there is a free circulation. In the mouth, under the very circumstances where the teeth decay most rapidly, we find all these agents at work, and from the analogy between the decay of the teeth and the decomposition of other animal and vegetable substances we have for a long time regarded the disease commonly, but erroneously, called *caries* as a putrefactive decomposition of the animal portion of the tooth. This we think may take place before any portion of the lime is dissolved by acids.

At the same time this putrefactive process is probably assisted, and perhaps hastened, by the putrefactive decomposition of vegetable and other foreign matter confined in immediate contact with the dead bone, and going on at the same time. We could never be able to comprehend how the strongest vinegar (acetic acid) could be used to the great extent which many make use of it, as a condiment, for years, without apparently injuring, or dissolving, any portion of the teeth, if the acetous fermentation in the mouth is sufficient to produce the rapid decay of the teeth which is daily met with. There must be some other cause which, in the present state of dental knowledge, is not yet fully understood.

We have been betrayed into passing the above remarks, from reading the thesis of Mr. Bond, and from considerable thought upon this complicated and imperfectly understood subject. They are very crude and hastily written, but if they help to throw more light upon the subject they will not be labor lost.—ED. REC.

## AMALGAM FILLING.

MR. EDITOR.—In your Journal for September last, at the close of what was called the Amalgam Controversy, but which in fact embraced almost every thing except the merits of amalgam for filling teeth, I noticed the following: "The subject of the use of Amalgam, for filling teeth, has never, in our opinion, been treated fairly in this country, and never can be until the strong party feeling, which now exists, shall have subsided. At a proper time we intend to give our views in full upon the subject, and in the mean time we shall continue to publish such facts concerning it as may come under our own observation, or be communicated for the Recorder."

It is much to be regretted that party feeling should ever exist among men engaged in a scientific or artistical employment, even when confined strictly to the profession, and it should be severely deprecated when questions involving such feeling are brought before the public eye, and become a part of the newspaper topics of the day. When men engaged in the same pursuit fall out and quarrel upon a subject purely professional, and arraign each other at the bar of public opinion, they generally make themselves ridiculous and bring reproach upon their calling. The opprobrium of the medical faculty has ever been that hardly two can practice together without quarrelling. Until this quarrel commenced in Onondaga County, I am not aware that the Dentists had been regarded as a quarrelsome race. Each man practiced "on his own hook," there was work enough for all and a constant demand for more dentists; but now the tables are turned, the profession is well stocked, business grows dull with many, and they hope to better it by undermining the reputation of others. Now, Mr. Editor, they had better take heed lest they get caught in their own snare. If I can read the signs of the times, none of the parties most prominent in the "Amalgam Controversy" stand any higher in the estimation of the profession or the public than they did before they enlisted.

I propose, with your permission, to examine some of the questions which have been mooted in this contest, and as "facts" are what you wish to have communicated, I will copy a few cases from my note book.

The first, and perhaps the most important question, with many is, will this Amalgam when put into the teeth produce upon the constitution the specific effects of mercury? Will it produce ptyalism?

Although much has been said upon both sides of this question I do not consider that it is yet decided. There are many dentists, whom we should think, ought to know what ptyalism is, who have unhesitatingly declared that it has been produced by the presence of Amalgam fillings in the teeth, while others, perhaps as good judges, who have seen the same cases, declare that there was no appearance of a mercurial effect, but that the whole irritation of the mouth which had

been mistaken for salivation, was to be attributed to the presence of dead teeth, tartar, spongy state of the gums, &c. The following is the only case of this kind which has come under my observation.

Case of Miss C——. This has been pronounced a decided case of salivation from amalgam fillings put into several teeth about two years since. I called with Dr. — to see it to-day. The following was the state of the mouth, as near as I can recollect. Two left superior bicuspedes, one superior molar, and two or three lower front teeth have amalgam fillings in them, which are very black and have stained the three upper teeth (the nerves of which were destroyed when the operations were performed) through their entire crowns. The lower teeth which have live nerves in them, are of their natural color, except immediately about the plugs. They are, as near as I can remember, the right canine and one on each side of it. All the lower front teeth have some tartar on them, although but little. The whole gum, which has been considerably absorbed from the two central incisors, so as to make them a little loose, is in a spongy, scorbutic state. She has had, at different times, pains in all the lower front teeth; but the back teeth, on the lower jaw, which are more healthy, have never given her any trouble. The upper teeth, which are dead and filled with amalgam, are often sore and painful after any uncommon exposure to cold; but those which have never been filled never gave her any trouble, and the gums on the upper jaw are quite healthy except just about the dead teeth. I considered it nothing more than a common case of spongy, inflamed gums and dead teeth, in a mouth where a gradual absorption of the alveolus was going on, from neglect and perhaps some natural predisposition towards shedding, or falling of the teeth. Miss C—— confessed (I did not like to question her too closely upon this subject) that she did not brush her teeth *every day*, and that since she commenced using a powder, which was but a week or two since, the gums had improved.

*August 23d, 1847.*

It will be said that if the dentists who had pronounced this a case of ptyalism were mistaken, it does not prove that others have not been salivated by amalgam fillings. This I admit; but it shows that mistakes may occur on one side as well as the other. I may remark here that so far as I have heard or read, every case of reported salivation, from amalgam fillings, has come under the observation of those who did not use it and were opposed to its use, while those who have been constantly using it for years, have never met with an individual case. How shall we account for this singular fact except by supposing that both have been mistaken. This at least would seem to be the fair inference.

In estimating the probabilities of salivation being produced, by the insertion of amalgam fillings, it is proper to take into consideration the fact, that among thousands of fillings, of this kind, which, during the

last fifteen years have been annually inserted in the teeth, in this country and in Europe (where, from all accounts, it is used by almost every dentist) but very few cases of ptyalism have been reported, and these only by persons who are decidedly opposed to its use in all cases and in almost every instance, after their opinions had been publicly expressed.\* During the last ten years I have seen perhaps one thousand persons with from one to ten amalgam fillings in their teeth, and the case reported above is the only one which has come under my observation, where it was even pretended that any effect had been produced by the mercury contained in these fillings, except upon the tooth itself, and a slight discoloration of the gold fillings which happened to be near those filled with the amalgam. So far as I could judge, from a close observation of these cases, I have come to the conclusion that when the teeth so filled had live healthy nerves before the operation, when they were well brushed after it, in short, all other things being equal, the secretions were as healthy, the gums as sound, and the breath as sweet as though they had been filled with gold or any other material.

It is the misfortune of amalgam that it has been most used in dead teeth which being causes of irritation in the jaw, often produce severe inflammation, terminating in ulceration. This often happens when such teeth are filled with gold, but, in these cases, I have never heard of the gold or the dentist being blamed for the subsequent inflammation, especially when the work was well done.

Every person who is at all acquainted with the nature of mercury and mercurial preparations must admit that, in theory at least, it is possible that a mouth full of amalgam fillings might, in a constitution peculiarly susceptible to the specific effects of this agent, produce ptyalism, and such as believe in the new doctrines of homœopathy, I believe generally condemn the use of amalgam on this principle. Such, I think, are perfectly consistent, for if I believed in the effects of such infinitesimal doses, I certainly should not wish to be constantly under the influence of so potent a material as mercury.

The question of salivating therefore I shall leave for each dentist to settle for himself, presuming that those who think there is any probability of salivating their patients with amalgam will discard it altogether and extract, or leave untouched, such teeth as can be filled with nothing else.

#### *To be Continued.*

\* It has been said that the reason why those dentists who use amalgam do not see the cases of salivation produced by it, is because their patients then lose confidence in them and fly to others. Is this so? If a gold filling falls out, if a pivot tooth becomes loose, or the root inflames, if a tooth comes off from a plate, does not the patient generally return to the dentist who performed the operation to have the work repaired? Why then should he fly from him only when trouble comes from an amalgam filling?

## CASE OF CONGENITAL FISSURE OF THE PALATE.

[From the Boston Medical and Surgical Journal.

Mr. F., of N. Hampshire, aged 18, applied to me, in the autumn of 1846, with a congenital fissure of the palate. His voice had the sound peculiar to these openings, causing the patient much mortification; articulation was very indistinct, and at times unintelligible. During deglutition food and liquids passed freely into the nose; and the nasal secretions were continually passing into the mouth.

He had applied to a distinguished surgeon, who informed him that the opening could not be closed by a surgical operation. The opening extended nearly the whole length of the hard palate, being in extent one and a half inches, and varying in width from three fourths of an inch to a point, the point being forwards. The hard palate did not have its normal direction, but was inclined upwards at its anterior portion at an angle of forty-five degrees. The edges of the opening were smooth, varying in thickness from an eighth to one fourth of an inch.

The object in this case was not only to close the congenital opening, but to restore a normal direction to the roof of the mouth. A model was taken of the parts, from this a mould was made; and in this mould a mineral paste placed, which was afterwards taken out, enamelled the color of the mucous membrane, and baked. In order to compensate for the shrinking of the paste in the process of baking, a longitudinal section and several transverse sections of the model were made, and a strip added of sufficient thickness to remedy this.

Immediately on the insertion of this artificial palate, the voice was very much improved; and continued to improve while the patient was under my care, and now is very nearly natural. A close examination was necessary to distinguish this from the natural palate. The difficulties of deglutition, &c., were completely removed. Its small anterior extremity allowed it to be inserted easily; and the portion above the neck, or constriction caused by the edge of the opening, being larger than the portion below, firmly retained it in place. In order, however, to prevent its inclining backwards from any incidental relaxation of the soft parts, precaution was taken, before the hardening of the preparation, to make a hole opposite to the first molar teeth for the insertion of a vertical screw, to which might be fixed a horizontal narrow gold band, attached by a clasp to the first molar teeth. This apparently complex, but really simple apparatus, could be easily removed and replaced by the patient.

*Boston, Nov. 1848.*

W. T. G. MORTON.

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# NEW YORK DENTAL RECORDER.

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JANUARY 1, 1849.

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## SOCIETY OF DENTAL SURGEONS OF THE STATE OF NEW YORK.

This Society held its regular meeting on the first Tuesday in December at the rooms of the College of Pharmacy, No. 411 Broadway. The meeting being called to order by the President, about twenty members answered to their names, after which the minutes of the previous meeting were read and approved.

According to the rules, the "rules of order" were next to be read: a motion was made to dispense with the reading of the rules of order at this meeting, this motion was amended by Dr. Covill, so as to make it dispense with the reading of the rules of order at all meetings, except the annual meeting, unless called for. This gave rise to a lengthy debate and was finally decided in the negative. The rules were then read, after that one, which prescribes that "no member shall speak more than twice upon the same question, without leave of the Society, nor more than once, in any case, until every member choosing to speak shall have done so," had been violated by several members.

The Treasurer then made his report, which showed that the finances of the Society were in a healthy condition; about Three Hundred and Twenty Dollars remaining in the hands of the Treasurer.

Reports of committees being called for, the Executive committee reported that they had taken great pains to procure a room for the use of the Society at the price to which they were limited by the Society, (\$125 per annum,) but could find none except the one in which the Society was then convened; this could be procured twice a week, day and evening, for One Hundred Dollars per annum. The object of the Society in procuring a permanent room had been declared, at the annual meeting in September, to be for the purpose of establishing a kind of Dental Lyceum, with a museum and library, where the meetings of the Society were to be held, and chemical operations performed before the members and their students; but as some of the members thought that room unsuitable, the committee had not seen fit to hire it without a vote of the Society.

At this stage of the proceedings a motion was made to postpone its farther discussion until Dr. Chase had read an essay which he had prepared for the occasion.

This motion being carried, Dr. Chase then read an interesting paper upon the importance of associations of this kind for mutual improvement, and the elevation of the profession of the Dental Surgeon. It contained much useful instruction, and hinted to the members that if they would do away with the very prevalent opinion among the public, that the dentists were an ignorant, conceited and obstinate class, given to quarreling and backbiting and by no means calculated to harmonize in a society of this kind, it must be done by mutual concession, interchange of views upon practical subjects, and a cultivation of kindly feelings towards all honest and respectable members of the profession.

The Society then resumed the discussion of the report of the Executive committee on the subject of a permanent room. Dr. Lovejoy was in favor of clinics at least twice a month, and every Saturday if possible. Several members, including himself, he said, had offered to give their services one Saturday afternoon in every month, and he did not doubt but patients could be readily procured.

Dr. Covill agreed with him; but did not think that room a suitable one. He thought the Society should have a pleasanter and more accessible one, carpeted and furnished in every way like a dentist's office. As such a room could not be procured at this time by the committee he was in favor of deferring the establishment of dental clinics until after the first of May next. From conversations which he had had with Mr. A. Jones, of Broadway, he could state that there was a prospect that he would furnish the Society, after that time, with such conveniences as they required for dental operations, library and museum.

Dr. Bridges was willing to go any length that the Society thought proper to procure a respectable room for clinical operations. He hoped to see this done, and trusted that the good work which the society had begun would be fully sustained and carried out, and that ere long, we should have a dental college established here; there were men enough among us who were capable of sustaining it. No advantage could now be derived by students and young operators from attending our meetings, and he should not feel bound to pay into the treasury the sum required by the bye-laws for a student, if he had one.

Dr. Manson was anxious in the beginning of this society that it should go ahead. He had been anxious to retire from the society, because he thought that nothing was being done to recompense the members for the time and expense involved in coming here, night after night, to discuss matters of trifling im-

portance—the time had been spent in mere quibbling. He thought the society should have a better place for its meetings.

Dr. Stillwell thought there was some wisdom left in the society yet. He was not yet ready to see it disbanded, but wished to have a suitable room procured and commence operations immediately; he was willing to give one or two days in each month to operate gratuitously for the poor, and had no doubt but patients enough might be procured. He contended that the society should establish these clinics immediately, and fulfil the pledges which were held out by some of the leaders at the time of its formation.

Dr. Allen was also anxious that the society should do something for the benefit of its members and also, to make itself respectable in the eyes of the world. It had now been established more than a year and but little had been done of any practical benefit to the members or the public. He wished to see dental clinics established for two reasons: first, that each might have an opportunity to see the different methods of practice pursued by the other members, with the view of improving his own; and second, that the inmates of some of our schools and charitable institutions might have an opportunity of being benefited by those operations. He thought that this was the true way to improve ourselves and elevate the profession in the estimation of society. He had been the first to volunteer his services for one afternoon of every month. If no other room could be procured he was in favor of beginning there.

Dr. Ambler stated that a room could be procured in Christ Church basement; but there was some doubt whether the light would be sufficient for operations. He thought best to defer clinics until after the first of May, but was willing to devote one half day each month if the society thought it best to begin at this time.

Dr. Clark was not opposed to clinics, but thought the society was not yet ready to undertake them.

The question was then taken on the propriety of deferring the leasing of a permanent room until after the first of May, and decided in the affirmative.

The Librarian stated that all the books had been bound and numbered, and were ready to be delivered to the members when called for.

The committee appointed on the subject of procuring a legal incorporation of the society, reported in effect that, in their opinion, the matter had better be postponed until some alteration had been made in the constitution, which could not be until after the next annual meeting.

The Society then adjourned *sine die*.

## POPULAR TREATISES ON THE TEETH.

ANCIENT AND MODERN HISTORY OF THE TEETH, THEIR STRUCTURE AND IMPORTANT UTILITY; METHODS OF RESTORING TEETH; MEANS OF ALLEVIATING PAIN; PROVING THAT BAD TEETH PRODUCES BAD HEALTH AND DISORGANIZES THE WHOLE SYSTEM; also, manner of inserting the new and beautiful Terre Metallic American Teeth, in whole or parts of sets, &c., &c., by *Thomas Manson*, Surgeon Dentist, Member of the Society of Dental Surgeons of the City and State of New York—ten years practical Dentist.

The above is a very long title to a very short book, written ostensibly to convey popular information to the multitude, but, in reality to make the writer a popular dentist; two objects which are not only allowable but highly laudable when done with a proper spirit and in a proper manner. The spirit displayed by Mr. Manson, in his book, is highly commendable, but the manner in which the book is got up is positively shocking, as all who are familiar with the King's English will perceive by reading the title. The typography is but little more commendable. The practice of writing and circulating these short popular treatises has become quite common among dentists, of late years, and is perhaps, the most dignified and least objectionable method of advertising—for it is well understood now that this is the object and intent of the writers—as they convey considerable important information to those who have teeth to save. It is true that, in these little books, we occasionally meet with new and curious theories which sometimes startle and amuse the learned; as for instance, in one published by a Buffalo dentist a few years since, the writer had discovered that the tartar was secreted by the teeth around which it was encrusted, similar to the manner in which the Crustaceæ secrete the lime which forms their shells. The writer, however, forgot to account for its formation on gold plates and porcelain teeth.

There is also an explanation of the "Cause of Tender Decayed Teeth" in Mr. Manson's book, which strikes us, to say the least, as curious and somewhat ingenuous. We copy it verbatim et literatim.

"The true explanation of this pain, where no nerve is exposed, is as follows: The tubuli is softened, and converted into a state resembling cartilage, the calcareous matter in their calibres is dissolved, and replaced by a morbid fluid, which, when the tubuli is compressed by the touch of an instrument, is injected forcibly on the surface of the pulp, and produces the tenderness, which is sometimes as severe as the exposure of

the pulp or nerve. When the decayed and softened part is entirely cut away, this pain ceases, because the parietes of the healthy tubuli, are too rigid to allow the compression to take place; this is commonly attributed to the sensible and inflamed bone."

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### AMBLER'S JOURNAL OF DENTAL OPERATIONS, FOR 1849.

The practice of keeping a record of all operations performed by the Dentist, has now become very common, and all must see the great advantage to the science as well as convenience to the operator himself. It not only enables him to detect his own operations, thereby preventing imposition from being practised upon him by his patients, but accumulates, in time, a vast amount of statistical information for the profession. Various plans have been devised, recently, to facilitate this object. That of the above we think as convenient and simple as any we have seen. It contains a form for every day in the year, with a blank page at the end of each week for miscellaneous remarks, memoranda, &c. It also has blanks for individual accounts, into which all the various operations performed during the year may be conveniently posted. It likewise contains a statement of the Dental Colleges, Societies, and Periodicals, with a List of their Officers, Terms, Conditions of Membership, &c. &c. Several manufacturers, and venders of materials used by dentists, have also advertised in the work.

Dr. Ambler has also published an edition without the daily forms, but having a blank on the left margin for dates, and the printed diagram of the teeth on the right. We can recommend this Journal to those who wish a neat, cheap, and convenient memorandum and account book. They may be had of the Author, or of Messrs. Jones, White & Co., 263 Broadway.

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**WHITES'S TOOTH-ACHE DROPS.**—The remarks that follow this preparation are by Dr. B. B. Brown, of St. Louis:—

"Resepée for making White's Tooth Ache Drops. Take one oz. of strong tincter of Opeom, and do of strong camphorated spirits of wine, and 1 oz of oil of peppermint, mix them together then add about one half oz of Nitric Acid if it is not too strong." T. WHITE.

"Vast mischief has been done by the use of the above combination, and, especially when applied to the teeth as a preservative against decay. Indeed, I have seen hundreds of teeth ruined by its use, and yet, perhaps, much of the mischief which it effected was through the recommendation of those who should have known better, and whose duty it was to protect the ignorant against imposition."

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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## DANGEROUS EFFECTS OF CHLOROFORM.

[Communicated for the Dental Recorder.]

IN these days of patent "pain killers," and newly discovered agents for producing anesthesia, anything which will throw light upon that subject, or lead to investigation, is acceptable to those who have need of agents which will in any degree alleviate human suffering, (and who has more need of such than the dentist?) I have therefore thought that perhaps a short sketch of my experience in the use of ether and chloroform, might possibly prove interesting or instructive to some of the numerous readers of the Recorder. I first commenced the use of ether, in December, 1846, having been humbugged into the patent right to use the article, by the pretended discoverer, W. T. G. Morton, (I say *pretended*, for I believe every one, both in this country, and abroad, now gives the credit of the discovery to the late Dr. Wells of Hartford Connecticut, though perhaps Mr. Morton may deserve some praise, for bringing the matter into more general notice.) I continued the use of it about one year, during which time I gave it in a great number of cases, not only for operations in the mouth, but for amputations, dislocations, etc. etc., and pretty generally with success, being very careful to whom I administered it, and of the quantity given.

After the introduction of chloroform for the same purpose, I commenced the use of that article, and have since continued it in preference to ether for several reasons, viz: it produces no cough and seldom any unpleasant sensation in the chest, it has an agreeable odor—and is also employed with greater facility, a much less quantity being required to produce the desired effect than of ether; numbness generally takes place sooner from chloroform than from ether. Since I commenced using chloroform about a year ago—I have continued it—always, however, with great care, and without any unpleasant results,—until quite recently; I have now been induced to abandon it entirely, from having a case where *SYNCOPE* was produced, which came near proving fatal to the patient.

September 27th, 1848, Mr. . . — called upon me to have an ulcerated tooth extracted, and insisted upon taking chloroform, saying that he had taken ether and chloroform, each once before and with good effect. I then remembered that I had administered chloroform to him about three months previous, but without producing much numbness. This time he said, he wished to take a little more than he did the last, and as he appeared perfectly healthy, and had experienced no inconvenience from his former inhalation, I considered it safe to comply. Accordingly I turned about half a drachm upon a napkin, directing him to inhale slowly and quietly, at the same time holding the napkin at a little distance from the mouth, that the vapor might be so diluted with atmospheric air as not to produce too sudden a shock upon the nerves. After about one minute had elapsed, I thought he had taken a sufficient quantity, and to my inquiry he answered that he had. I then proceeded to extract the tooth, which was very easily accomplished, the patient being sensible of what was transpiring, and feeling some pain. Soon, however, he remarked that he felt bad, and I noticed that pulsation and respiration were both becoming very weak, and in a few moments he fell back in the chair; his muscular system seeming entirely relaxed.

Being alone, I stepped to a closet a few feet distant for spirits of ammonia, and on returning could not perceive that he breathed or had any pulse; he had every appearance of being dead, though I suppose the heart's action had not entirely ceased. Having no suitable instrument for artificial respiration, I immediately applied my own mouth and lungs to that purpose, stopping the nostrils with my thumb and finger, and compressing the chest with my arm, (not daring to leave the office for assistance.) After executing for him about a dozen inhalations and exhalations, there was a contraction of the muscles, and I perceived a reaction, his face being very red. I then applied the ammonia and told him to breathe or he would die, which he says he heard, and which was the first return of consciousness after the tooth was extracted.

He then very soon revived, and in half an hour had entirely recovered from the effects of the chloroform, and has remained well ever since.

I think one of the strongest objections to the use of either of the above articles, to be their "cumulative property," as Dr. Snow calls it—that is, an increased effect after inhalation of them has ceased, on that account perhaps more than any other, I consider their use dangerous, for we have no means of knowing exactly what will be the increased effect, as different individuals are affected differently. In my own practice I have discontinued the use of them entirely, and think if they are ever used it should be with the utmost precaution, and only by those persons amply qualified by study, sound judgment and experience, to prejudge the effects of their administration upon different constitutions and temperaments.

Norwich Dec. 15th, 1848.

Yours, truly,  
W. H. ALLEN.

## AMALGAM FILLINGS.

MR. EDITOR.—The next question which I propose to examine, in connection with amalgam fillings is, will amalgam effectually arrest caries in a tooth? I do not propose to discuss the matter theoretically nor scientifically, as I make no pretensions to either philosophical or chemical knowledge, but simply propose to give you the result of my experience and observations, and examine the subject in the light of common sense, so far as I am capable of exercising that rare quality of the human mind.

I have stated that it is the misfortune of amalgam, that it has been most used in dead teeth: many of these have been so much decayed, that they would hardly bear to be properly excavated, and leave strength enough to sustain the amalgam, but would frequently crumble away with the first act of mastication. Where this happens, if there is any soft decomposed bone remaining under the amalgam, which the fracture has reached, the fluids are freely admitted again to the bone, and decay goes on as it did before it was filled, gradually undermining the whole filling. The same thing happens if instead of amalgam we use tin foil. This is therefore no fault of the amalgam. The truth is that amalgam fillings have been put into thousands of teeth, which ought not to have been filled with any material, and which could not be preserved by any kind of treatment. It is therefore, unfair to judge of the quality of any material used for filling teeth, from its want of success in cases of this extreme character: but it has been said, that amalgam always shrinks while hardening, and of course cannot fill the cavity after it has become solidified. From circumstances which have come under my own observation, I am inclined to think that this is a mere hypothesis, or a conclusion drawn from analogy, and not a fact. We know that most of the plastic materials do shrink while hardening either by drying, when they lose a portion of their substance, or by fusion, when the particles settle together and increase the density, and consequently the specific gravity, but it has never been shown, nor is it probable, that the solidification of amalgam is due to either of these processes. It is more probable that it undergoes a semi-crystalization while hardening, and that its bulk is increased, instead of being diminished. I have repeatedly filled teeth with amalgam, which were very weak and frail in some part, and have had my patient return in a few days with this thin part completely crumbled away. For a long time I attributed this to eating upon the tooth, but I afterwards found that it happened in cases where the teeth had no antagonists, and the patients averred that they could not use them for mastication. I have also put it into the sides of molar teeth where it was, at the time of filling, smoothed off with great care, even with the surface of the enamel, and when the patient called a few days after, for the purpose of having the amalgam more effectually burnished and polished than can be done while it is soft, I have plainly seen that



the edge of the filling projected beyond the corresponding edge of the enamel. How shall we account for these facts if the material shrinks while hardening?

A writer upon this subject, (Prof. Westcott) quotes the following sentence from Henry's Chemistry. "The specific gravity of an alloy is seldom the mean of its component parts. \* \* \* An alloy of *silver with mercury*, though the former metal is specifically lighter than the latter, possesses so much acquired density as to sink in quicksilver." He (Dr. Westcott) continues "Now, if the above observation be correct, the actual shrinkage in the process of hardening, cannot be less than two twenty-fifths. To make the absurdity apparent of using the compound, with the hope of arresting decay in the teeth, no comment is needed."

First, let me remark that according to my experience "the above observation" is not correct. I mixed a quantity of pure precipitated silver with purified mercury, prepared for daguerreotypists, and after pressing it in chamois leather, so as to expel the excess of mercury, and rolling the mass into a globular form, I put it into a bath of the same kind of mercury, and found that it floated in it, showing a portion of the convexity above the surface of the mercury: but, supposing that under some circumstances it actually sinks in mercury, the conclusion to which the Doctor arrives does not necessarily follow, unless it is shown that this shrinkage takes place after the paste is introduced into the cavity of the tooth. It is not unlikely that the specific gravity of the paste when in the plastic state, before hardening, may be greater than that of the mean of its component parts, and that during the process of solidification, or semi-crystalization, it may expand instead of contracting.

I mixed a quantity of mercury and silver, by triturating them in a wedge wood mortar, and after expressing from it all the mercury I could, while it was in the proper state for filling teeth, I suspended it by a hair, and weighed it in water: noting its exact weight, I then laid it by for twenty-four hours and weighed it again, and found that its weight in water was a trifle less than when first weighed, showing a slight expansion of the amalgam while hardening. I have stated that I am neither a chemist, nor a philosopher,—am unaccustomed to try experiments of this kind, and as the results which I have arrived at conflict with high authority, I give them with a due degree of diffidence. It would be a great satisfaction to many inquiring minds, (for although this subject has been silenced among the members of the A. S. of D. S. by arbitrary dictation, it still elicits much enquiry and serious thought among the profession generally,) if some competent person would thoroughly investigate, without favor or prejudice, the physical and chemical properties of amalgam as a substance for filling carious teeth. I leave the questions involved in chemistry and philosophy, therefore, to abler minds, and will give the result of my observations and practice with amalgam, so far as they relate to the ques-



tion, *will amalgam preserve the teeth?* The following cases are copied from my note book.

Case 1st. Mr. C — has a second lower molar tooth, which was filled with amalgam in 1840, by a dentist at the west. It had troubled him (as he says) for five years previous to the operation, so much that he could not eat upon it. The dentist destroyed the nerve and filled it with amalgam. Since then it has given him no trouble except a slight soreness at one time, which soon passed away without any ulceration. The tooth is now perfectly sound, and as firm in the socket as any tooth in the head. It is the second tooth only, that I have seen which remained tight, without any absorption of the alveolus around it, so long after the nerve had been destroyed, (the other was filled with tin foil about twenty years since, and is firm yet.) One half of the crown of this tooth is gone, and the remainder has risen so as to meet its antagonist, where he does most of his eating.

Case 2d. Mr. W. had several teeth filled with amalgam in 1840, by a Mr. Mann, among them was one anterior lower molar, in which there was a large cavity on the grinding surface, but not extending to the nerve. It remained as firm and healthy in the socket as any tooth in his mouth. The enamel on the lingual side broke away soon after the tooth was filled. Owing to the loss of the lower molar teeth on the other side of the mouth, he was compelled to do most of his eating on this and the adjoining teeth. A superior bicusped filled with amalgam at the same time, had decayed so much on its opposite side within the last two years, that I decided to extract it. On examination the whole of this tooth, root and all, was found discolored by the amalgam, while its mate on the opposite side of the mouth, having a healthy nerve in it and a large amalgam filling on the posterior side, appeared healthy and of good color. The surface of the amalgam fillings in all these teeth showed no corrosion; the scratches made upon it by the instrument used in filling were clearly discernible although it was very black.

Case 3d. Extracted a superior molar for a young girl, which her mother informed me, had been filled four or five years with four amalgam plugs. On the front side, next a deciduary molar which crowded upon it, the tooth had decayed around the filling until the nerve was exposed, and as it was exceedingly painful I extracted it. The reason given by the dentist, for filling this tooth with amalgam was, that it was so very tender and painful when pressure was applied to it. I may here remark, that I consider this a very poor excuse. On examining the tooth the color appeared perfectly natural, the amalgam although discolored on the exposed surfaces, had not stained the bone. On cutting open the crown, I found around some of the fillings a thin black film, under which the bone was quite white and free from caries.

Case 4th. In 1839 I put into the mouth of Mrs. G — a gold plate with eight teeth upon it. One end was clasped to a molar tooth, which at this time was perfectly healthy and free from decay. After wearing the plate a few years, this molar was found to be decayed

around about one-half of its circumference. It was thoroughly excavated and well filled with amalgam by a dentist in the neighborhood, and after the paste had had time to harden, the plate was restored to the mouth. In August 1848, the tooth which sustained the other end of the plate being gone, and the remaining ones so much diseased, Mrs. G — determined to have the whole extracted, and a complete set fitted. After the above molar was extracted, I cut open the crown and found the cavity around the filling entirely free from decay, and with only a slight film of black immediately under the amalgam which had imparted no stain to the bone of the tooth—the nerve was healthy. There was a slight decay on one side of the filling, which had evidently been caused by the clasp since the amalgam was put in. Mrs. G — informed me that according to the best of her recollection, the amalgam had been in *more than six years*. I have seen numerous cases of this kind.

I could easily fill a number of the Recorder with cases of this kind, where amalgam fillings had preserved teeth having healthy nerves, from five to ten years, and where the prospect is good that it will preserve them from caries as long as life endures: but I will not occupy your space by any more records of this kind, as every dentist who is not wilfully blind as it seems to me, can see them from day to day in his own office. If the only question concerning the use of amalgam, were whether or not it will arrest the progress of caries in the teeth when properly used, I should unhesitatingly answer, that I know of no substance more effectual for this purpose; but there are other properties belonging to amalgam, some of which make it objectionable, and which remain to be examined in my next.

C.

(*To be continued.*)

## OUR PROFESSION.

[For the Dental Recorder.]

THERE is a dignity to be sustained in all professions, that command any considerable influence over, or respect from the public mind; there never was, and probably never will be, a science reared into an existence, and respectable standing, where any other sentiment than dignity, predominated with the laborers in, and sustainers of the confederacy.

In the establishment of almost every branch of science, by confederated leagues of men, there has been associated, in the beginning, at least one man, that was identical with its prosperity, and this man when handed down to future generations, has been divested of all that is in opposition to an honorable, and dignified professional career: this alone is sufficient to give sight to the course of the pure stream of professional greatness, whose waters are the very purge of pretenders, and whose banks are the abiding place of all the non-pretending, up-

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right, and honest sons of science. I would that among this number more of our profession could be counted, how flattering to those who in the beginning of their professional career, come to the wise, honorable and happy resolve, to learn well by assiduity the theoretical, and as far as possible the practical branches of the profession, before offering themselves to the public as Dentists; I say how flattering, how gratifying to these, to know that their profession is well represented, in the non-pretending school of science: but how different is the practical fact in very many cases? A young man devotes but a limited time to the practical lessons in Dentistry, and the next you know of him, he has taken apartments in some public thoroughfare, or perchance if his pecuniary circumstances will sustain him for a short time, you will find him in some fashionable *place* or *street*, and to your astonishment, you do not see his simple name with Dentist prefixed, but no! in some conspicuous spot other than the door, perchance upon the side rail of the threshold to his apartments, or suspended near your head as you pull the bell knob, on a board measuring some two feet one way, by one and a half the other; the inscription in bright golden letters, *Doctor Dumb Simple, Surgeon Dentist*: now who among us (I appeal to every gentleman in the profession of polished sentiment and clear understanding,) does not deprecate such false assumptions? Nor do these falsities stop here; in a thousand other ways false impressions are pressed upon the public mind, for its pecuniary effect upon the pocket. Witness the advertisements in the different newspapers of the day, and you will find there too, falsehood upon the gallop, closely pursued by the signature of the dental quack.

If the above is deemed worthy of an insertion in the "Recorder," you may hear from me again.

January 1849.

ALPHA.

## OBSERVATIONS ON HÆMORRHAGE.

THE following excellent practical remark upon an exceedingly interesting subject to all practising dentists, is from an essay by Dr. B. B. Brown of St. Louis Mo., read before the Mississippi Valley Association of Dental Surgeons, at the annual meeting in September 1848. The essay commences with a brief description of the general anatomy of the vessels which furnish the parts in and around the mouth with blood, which we omit and commence with that part which is of most practical importance to the dental surgeon.

"Hæmorrhage is said to be active, when there is a preternatural flow of blood to the part, attended with an increased vascular excitement. The passive hæmorrhage depends either on mere relaxation and inactivity of the vessels, without any morbid changes in the constitution of the blood in consequence of previous disease, excessive

discharges of all kinds, or other exhaling influences, or it is connected, and probably in a greater degree dependent on a thin watery, or dissolved state of the blood; and therefore, incapable of communicating healthy impressions to the general and capillary system of vessels.”\*

Bichat says, “If I should class hæmorrhages, I should distinguish them, *first*, into those that come from exhalation; *second*, into those that are produced by rupture. I should place among the first, the bloody sweats, the mucous, serous, cellular hæmorrhage, &c., &c. Among the second, those that accompany wounds, aneurisms, &c.”† “Blood, from whatever organ it flows, may have two causes for its issue. The vessels may be ruptured by a morbid distension and impetus; or they may give way from debility and relaxation, their tunics breaking without any peculiar force urged against them, or their exhalants, admitting the flow of red blood instead of the more attenuate serum.’‡ There are numerous local causes operating in the production of hæmorrhage. Ossification of the arteries, by causing ulceration of their coats, may produce it. A blow upon the head may give rise to fatal hæmorrhage by the rupture of an artery. The slough that is cast off from a gun-shot wound may implicate an artery and cause very serious, if not fatal, secondary hæmorrhage.—*Gibson's Surgery*.

“Extensive ill-conditioned ulcers, by penetrating deeply, and laying waste the soft parts, may occasion fatal hæmorrhage by opening large arteries.”§ Hæmorrhage may arise in ulcers, either from the increased action which produces an hæmorrhagic tendency in the new formed vessels of the part, or bleeding may occur from the complete relaxation, or weakness of the vessels.”§ A wound of the soft parts may implicate an artery and cause hæmorrhage. Scorbutus, or scurvy, predisposes to hæmorrhage.

From slight wounds serious hæmorrhage, and even death, may follow. Such cases are said to be complicated with an hæmorrhagic diathesis.

Hæmorrhage may occur from the nose, constituting that variety known as epistaxis; when it occurs from the lungs it is denominated hæmoptysis; that from the stomach is called hæmatemesis; and that from the kidneys is known by the name of hæmaturia, while that from the cavity of the rectum, or verge of the anus, usually proceeds from hæmorrhoids.

Inordinate alveolar hæmorrhage sometimes follows the operation of extracting a tooth, and requires professional aid to arrest it; this condition generally depends upon some of the causes already enumerated, but it is not unfrequently accelerated by, and is sometimes dependent upon the imprudence of the patient in sucking the bleeding alveolus,

\* Eberle's Practice of Med., vol. 1., pp. 538-9.

† Bichat's General Anat. (translated by Hayword,) vol. 2, p. 82.

‡ Good's Study of Medicine, vol. 2, p. 456.

§ Gibson's Surgery, vol. 2, p. 66.

§ Abernethy, (by Castle.)

thereby preventing the formation of a coagulum in its cavity, the means set up by nature to arrest hæmorrhage. The patient, it is true, does this involuntarily; the novelty, warmth and saline taste of the blood, tend to beguile him into the error which he is committing. It is rare that a patient will ever acknowledge any participation, or agency *on his part*, in bringing about such a condition; however, the mischief is soon accomplished, while the lacerated end of the bleeding vessel lays flaccid in its bony canal, its contractile power greatly diminished, or entirely lost; hence, the hæmorrhage must continue unabated. A high state of inflammation in the soft parts surrounding a tooth, brought about by inflammation of the periosteum of the fang, and subsequent suppuration of that tissue, excites the absorbents to take up sufficient osseous matter for the accommodation of the sac pressing upon the bony structure of the jaw. This sac, not unfrequently, lays bare the main trunk of the artery which gives off its delicate twigs to supply the teeth with blood; hence, the presence of continued inflammation would produce increased vascular action, and consequently, a determination of blood to the part. The extraction of a tooth under such circumstances, (and generally it is the only alternative,) with, or without, imprudence on the part of the patient, is often followed by alarming hæmorrhage. Injuries of the jaws, combined with fracture, may wound vessels traversing their bony structure, and produce troublesome hæmorrhage. The operation of extraction may be performed under the most favorable circumstances, and yet alarming hæmorrhages follow, without any agency or indiscretion on the part of the patient, wherever a hæmorrhagic diathesis may exist.

When hæmorrhage proceeds from an artery, the blood is of a bright scarlet color, and is ejected from the vessels by jets, jerks *or per saltum*, as it has been denominated; if it proceeds from the veins, it is of a dark purple or red color, and flows in an unbroken stream.

TREATMENT.—“The general indications to be kept in view in the treatment of hæmorrhages, are; 1. To lessen the momentum of the circulation if it be above, or at its natural standard; 2. To diminish the determination of blood to, and moderate the local vascular action in the part from which the hæmorrhage occurs; and 3. To excite a contraction of the vessels of the part. The first indication is to be fulfilled by venesection and the exhibition of sedatives—as nitre, digitalis, cold, &c. The second indication demands counter-irritating and revulsive applications—such as cold, applied, if practicable, to the part from which the blood flows, and blisters, sinapisms, warmth, and rubefacient frictions, on remote situations. The last indication requires the internal use of astringents, such as sugar of lead, alum, muriated tincture of iron, &c., and when the situation of the part will admit of it, the external application of styptics.”\*

\* Eberle's Practice of Medicine, vol. 1. p. 544.

Dr. Goddard remarks, "that a hæmorrhagic diathesis, or tendency to shed blood from slight injuries, is very frequently hereditary, and lasts for life; while at others it is merely temporary, and is the effect of long-continued ill-health, or a state of the system brought about by unfavorable circumstances, such as confinement, bad diet, salt provisions, &c., &c. In those persons in whom this predisposition is hereditary, the slightest injury will cause very great, and sometimes fatal, loss of blood, and this condition is very difficult to remedy. When the dentist is aware of its existence, no consideration should induce him to remove a tooth, as the death of his patient might follow the operation."\*

The following case of hæmorrhage, combined with a hæmorrhagic diathesis, will serve to illustrate, in a remarkable degree, the subject under discussion. In the fall of 1839, I was called to see a young man, aged 19 years, who had had the second bicuspid tooth of the superior jaw extracted, seven days previously; he was, at the time, laboring under preternatural alveolar hæmorrhage, which had continued, with but little cessation, from the time the operation was performed until I was called in. His pulse was below the natural standard, skin sallow, and features of the face exhibiting much anxiety. I made the inquiry if he did not bleed inordinately from receiving slight injuries; he replied, that he generally bled a *week* from a scratch of a pin. He was considerably weakened by the loss of blood, notwithstanding a great variety of remedies had been employed to arrest the bleeding, by the dentist who extracted the tooth, and who had abandoned the case in despair, at the time it fell into my hands. I immediately cleared away the blood, and caused the mouth to be rinsed out with a cold saturated solution of salt water, (muriate of soda,) and applied a "*waxed cloth cone*," which instantly arrested the hæmorrhage from the alveolar cavity. But it was now discovered that the surrounding gum, where no wound existed, was giving off blood; and this remarkable condition continued to spread until the whole mucous membrane appeared to be involved; so that, when the mouth was opened, its surface could be seen covered with stalactitical coagula pendant from its roof and walls. Acetate of lead, combined with opium, was administered internally, warm stimulating applications to the extremities, and cold to the neck, face, and head; compresses of *waxed cloth* to the mouth, filling it up from time to time, in conjunction with the following lotions, to wit: decoction of nut galls with sulph. aluminæ, solution of quinine, solution of sulphate of copper, ice water, &c., &c. On the afternoon of the second day, the hæmorrhage had evidently diminished, but the patient was sinking, and from apparent symptoms, the lead had been exhibited as far as it was consistent with prudence. As the bowels were costive, I administered sulphate of soda, until free evacuations were produced; at the same time, I also abandoned the

\* Goddard on the Teeth, p. 112.

use of the lotions and compresses, and employed the *Oil of Ergot*, (secale cornutum,) which I prepared in the mean time, as a local application to the mouth by dipping locks of cotton in it, and laying them on the mucous membrane. This change of treatment was attended with entire success; for in a few hours, I had the satisfaction to arrest the most fearful hæmorrhage which it has been my lot ever to witness, as it had continued, with but slight intermission, for a period exceeding nine days. By subsequent treatment, a restoration of the young man to health was accomplished.

The oil of ergot (secale cornutum) was highly extolled, as a styptic remedy in arresting uterine hæmorrhage, some years ago, by a French writer. It is prepared by bruising the ergot in a mortar, and digesting it in sulphuric ether about twelve hours or longer; filter through paper, and place a wide, shallow glass vessel under the drop; in a short time the ether will evaporate and the residue will be the oil. I regard this substance as possessing remarkable properties, and invaluable in such cases as the one which I have just cited.

Goddard on the teeth, page 115, recommends the following combination:—

|                     |   |   |   |   |   |   |      |
|---------------------|---|---|---|---|---|---|------|
| R Sulphate of Soda, | - | - | - | - | - | - | ʒj.  |
| Muriate of Soda,    | - | - | - | - | - | - | ʒss. |
| Chlorate of Potash, | - | - | - | - | - | - | ʒix. |

Mix and divide into six parts; one of which may be administered every hour or two, until free purging is produced. The remedy diminishes the amount of serum, by the free watery purging which it produces, and the portion absorbed and mixed with the blood tends to confer a power of forming a firmer clot not possessed before."

A case is reported in the *Am. Journal of Dental Science*, vol. 6, page 320, from the *Manchester Medical Times*, in which there had been a hæmorrhage of ten days duration, following the extraction of a molar tooth; all local applications which the surgical attendants resorted to, having failed, the patient was put upon the internal use of the acetate of lead, and after this course had been continued for some time, sulphate of soda was administered with decidedly beneficial results.

A remarkable case of spontaneous hæmorrhage from the gums is mentioned in the 2d Vol., No. 4, of the *New York Dental Recorder*, and copied into the 3d No., Vol. 7, of the *Register*.—The bleeding continued upwards of three days, and resisted styptics and the actual cautery. When, finally, it was arrested by compresses of cotton, saturated with tincture of nut-galls, forced between the teeth where the seat of the hæmorrhage seemed to be.

After having premised the foregoing remarks upon constitutional hæmorrhage, let us now proceed to consider the treatment of the local form. The ligature and compression are the means generally adopted by surgeons of the present day to restrain local hæmorrhages, but, in addition thereto, there are many substances in use, which are intended

to effect the same purposes, such as alum, kino, muriated tincture of iron, the mineral acids, matico, nitrate of silver, sulphate of copper, kreosote, eau broccieri, nut-galls, the actual cautery, &c., &c.

Celsus recommended a wound pouring out blood, to be filled with dry lint, over which should be placed a sponge wetted with cold water, or lint saturated with vinegar and water, and pressed on the part with the hand. But the principal reliance of the ancients, was upon the application of the actual cautery to the wounded vessel and the surrounding soft parts; the heat thus applied produced an eschar, which closed up the orifice of the vessel, and prevented the flow of blood. Secondary hæmorrhage, however, frequently resulted upon detachment of the eschars, and rendered the case more difficult than it had been before the application of the cautery was made. The reason of this is apparent; for when the eschar formed, a portion of the sound vessel was necessarily included in it, and upon the separation, an orifice larger than the former one was presented, and consequently, a more profuse hæmorrhage followed. Le Oran recommends the application of a button of alum, or vitriol, which he affirms will prevent, or arrests hæmorrhage, if correctly applied, and confined to the extremity of the bleeding vessel. But styptics, generally, have now given way to compression and the ligature; the ligature itself acts upon the principle of compression when it is applied to an artery.

“From the numerous and diversified experiments of Dr. Jones and others, it appears that a ligature, when applied to an artery with sufficient force, divides the internal and middle coats, leaving the external coat entire. The blood is arrested in its progress by the approximation of the sides of the vessel, soon coagulates and forms a plug, extending as high as the first collateral branch. This serves as a temporary barrier, and takes off the force of the circulation, from the ligature and the extremity of the artery; in the meantime, the divided edges of the artery pour out lymph, which is not only effused in the cavity of the vessel, but between its coats; the irritation, also, excited by the ligature, gives rise to an accumulation of lymph on the outer surface of the artery. At last the external coat, continually irritated by the ligature, sloughs or ulcerates, and the ligature is detached, leaving the mouth and edges of the vessels filled and surrounded by a bed of lymph, into which the vessels shoot, and by uniting the sides of the artery, form a permanent closure.—After a time the coagulum is absorbed and the channel of the artery, as high as the first anastomosing branch, is obliterated and converted into a solid cord; the circulation is maintained by the enlargement of the collateral vessels.”\*

But there are some cases in which a ligature cannot be applied to the bleeding vessels, as in case of hæmorrhage from deep seated wounds, as those of the palmar arch, and that which takes place, sometimes, from the alveolus after the extraction of a tooth; in such

\* Gibson's Surgery, vol. 2. p. 75.

cases we must rely upon the judicious application of well directed pressure. As various means have been proposed for arresting alveolar hæmorrhage, it may not be wholly uninteresting to examine some of the leading appliances recommended.

Bell on the Teeth, page 307, recommends compression by means of lint firmly pressed into the bleeding alveolus. Gariot on the diseases of the Mouth, page 144, advises cold and acidulated gargles, compression by means of cotton, agaric, &c., dipped in acid, powdered resin, or gum arabic, to be applied to the part; also the actual or potential cautery. Snell on the Teeth, page 123, advocates, and recommends, the same treatment as pursued by Bell. Berdmore on the Teeth and Gums, page 38, advocates compression by means of lint, agaric, sponge or cork. Kœcker's Dental Surgery, page 197, recommends compression with cotton dipped in water acidulated with sulphuric acid.

Lefoulon's Theory and Practice of Dental Surgery, page 181, advocates compression by means of wax, to be retained in its place by the pressure of the jaws, which are to be kept closed by means of a bandage passed around the chin, and fastened to the sinciput; and if these means fail, the actual cautery is the last resource. Jobson's Treatise on the Teeth, page 106, recommends compression by means of lint, cork, or ivory, and the jaws to be brought together by a bandage. Harris' Principles and Practice of Dental Surgery, page 295, says: "Pressure, after all, I believe, is the only thing on which we can rely. If it be so applied, as to act directly upon the mouths of the bleeding vessels, it will be found to be more efficacious than the most powerful styptic, or any other remedy." Professor H. has used compression, by means of lint and sponge saturated with tincture of nut-galls, with much success.

Mauray's Treatise on the Dental Art, page 171, recommends compression by means of wax, the jaws to be forcibly closed and retained in position by means of a bandage; also, in extreme cases the actual or potential cautery, but he recommends great caution in the use of the last application.

Fitch's System of Dental Surgery, page 371, recommends compression by means of cotton, in conjunction with styptics, and astringents, such as tincture of galls, a solution of sulphate of copper, a tincture composed of brandy, myrrh and galls, or brandy alone, turpentine, dilute acid, or a solution of the nitrate of silver; and, in some cases the actual cautery. Goddard on the Teeth, p. 113, recommends matico or soldier's weed, solid nitrate of silver pointed somewhat like a pencil and thrust into the alveolus for a few minutes, and the following, which is certainly a valuable styptic: "Cause some alcohol to dissolve as much of the following substances as it is capable of doing, so that it may be a saturated tincture; ergot or secale cornutum, gallic acid, then one-fourth of kreosote by measure;" this may be used by saturating lint with it, and plugging up the bleeding cavity; and a watery solution of ergot is also recommended as a local application.

A case by Thomas Embling, Esq., is reported in the 4th vol. of the Am. Journal of Dental Science, page 65, copied from the London Lancet, in which a considerable portion of the alveolar process had been broken off, in the effort to extract a tooth; the hæmorrhage resisted all applications, even lunar caustic, and the actual cautery, it was finally checked by pressure applied by means of the thumb and finger.

Stockton's Dental Intelligencer, vol. 2, page 178, contains a very interesting case, reported by Dr. Roberts, F. R. S. S. A. C. of Edinburgh, in which the superiority of pressure over all other means, is fully demonstrated; and I refer to the journal for the full particulars of the case.

A case is mentioned in the 2d vol., no. 6, of the New York Dental Recorder, where hæmorrhage followed the extraction of a tooth, and continued several days; it was finally arrested by the application of a stimulant, to-wit: tincture of anthemis pyrethrum, or Spanish pelatory, applied by saturating a pledget of cotton, and filling the cavity with it.

An exceedingly interesting case of obstinate hæmorrhage, following the extraction of a molar tooth, is mentioned in the 8th vol., page 207, of the American Journal of Dental Science, where every application was resisted, until finally, recourse was had to the actual cautery, which fortunately proved successful.

A view of the cases and practice, which we have brought forward clearly shows that the leading remedy for hæmorrhage, as advocated by all the foregoing authorities, is compression; but, from the imperfect manner of producing it, styptics have likewise been generally recommended in conjunction therewith. Lint, cotton, sponge and linen rag, or any other kinds of simple cloth, are, in my opinion, equally objectionable, because they soon become saturated with blood, and hence, offer no obstruction to its progress, as it would then continue upon the principle of *interstitial circulation*. To the application of wax there are equally strong objections; its want of assimilation to a wet surface, and its structural incapacity to bear a sufficient pressure, when in a plastic state, will cause it to offer but a temporary resistance to the flow of blood between it and the walls of the alveolus; so with plaster of paris, (sulphate of lime,) or even the restoration of the tooth to its socket, the same results will occur as in the application of wax. The *actual cautery* has been confidently recommended as a *last resort*. I can only say of this *heroic remedy, or practice*, that it deserved no consideration from the enlightened dental profession, and certainly but little comment from myself, except to venture the inquiry, whether any man ever seriously contemplated carrying a *white hot iron* point through a bleeding alveolus to the *patulous mouth* of the bleeding vessel with a view of cauterising it successfully?

Some years ago, I was called to visit an urgent case of alveolar hæmorrhage, where I found a medical gentleman heating a *poker*,

with the design of *applying the actual cautery*. I asked him what he thought of *compression*? He replied that it had been already tried, and had failed; and that nothing but the actual cautery would do. I urged compression; and the "*waxed cloth cones*" were applied, and the hæmorrhage was instantly arrested.

The whole course of treatment indicated in alveolar hæmorrhage may be summed up in one word, namely, compression.—But, as there are numerous objections to all the appliances already cited, I have been induced to adopt a plan of treatment not liable to any of the exceptions before taken, and which has been, thus far at least, perfectly successful in every instance in which resort has been made to it. There are many cases in which a bit of lint, or cotton, dipped in any of the ordinary styptics, may arrest alveolar hæmorrhage; but there are also other instances which demand more appropriate appliances, and all the aid which professional skill is able to bring to bear upon them, in order to obtain success; indeed, I have had several cases in the course of my professional career, which *could not have been arrested* by any other local means, than compression upon the plan which I am about to suggest.

The treatment I propose is to arrest hæmorrhage with the "*WAXED CLOTH CONE*," which will be found, I believe, perfectly efficacious in, and applicable to, all cases, not only of a simple, but likewise, of an alarming character.

The cone is made by dipping fine linen, or cotton cloth, into boiling wax, the cloth is then to be cut into various sizes resembling the diagram,\* and these are to be rolled into cones. It is now thirteen years since I first constructed these cones in the manner indicated, in order to meet the pressing wants of a case of great emergency, that had resisted every other application, until the experiment in question was crowned with complete success. I can, therefore, with confidence recommend to the profession, after long years of their successful use, that nothing known to the profession of dental surgery will be found more satisfactory in its results, than the foregoing simple, yet efficient remedy.

The cones possess the property of adapting themselves to the varying inequalities of the alveolus; but previous to applying them, they should be immersed, for a moment, in a little warm water, and then, by means of a large blunt plugging instrument, be pressed firmly into the cavity. Some regard should be paid to the size of the cone, as it should approach that of the fang, or fangs, which occupied the alveolar cavities. They will be found to exert positive compression upon the apex and walls of the cavity, without undergoing any change of struc-

\* These pieces of cloth are cut in the form of a right-angled triangle and are then wound, beginning at the short side of the triangle, into the form of a cone the proper form and size to fill the alveolus.

These angular strips may be cut from one inch to four inches long at the base, and from a quarter of an inch to one inch high on the perpendicular, so as to have cones of all sizes.

ture, thereby precluding the possibility of a continuance of the hæmorrhage. The body of the cone being composed of cloth, saturated with a substance impervious to blood, and firmly rolled, precludes the possibility of any moisture becoming insinuated between the folds and disturbing its contact with the alveolus. Examination will demonstrate, that the cone, from its construction and the materials which compose it, is capable of sustaining a great pressure upon its base, and to an extent to answer all the purposes contemplated in its construction. Previous to the introduction of the cone, the cavity of the alveolus should be wiped out with a lock of cotton, and the mouth well rinsed with cold water; after the cone is forced into the cavity it is to occupy, a compress may be placed over its base, although not always necessary, only in extreme cases, and the patient caused to close his teeth upon it; or, if the patient has no teeth to be antagonized with the compress, it may be increased in its longitudinal dimensions, so as to be in contact with the gum. If the patient should prove refractory, I would recommend Gibson's, or Barton's, bandage, which is used for fracture of the lower jaw.

And in those cases in which there is difficulty in controlling the patient, I would further recommend pinioning the arms, which becomes frequently necessary, in demented persons. It is always the case, that, after preternatural hæmorrhage is fully established, the introduction of any thing causing pressure upon the walls of the alveolar cavity, gives acute pain; this, however, the operator should not regard, but proceed to perform his duty thoroughly. The cone may be removed in twelve, or twenty-four hours, or as soon, as in the judgment of the practitioner, it may be safely done. After the operation of extraction is performed, in all cases it is necessary to caution the patient not to suck the bleeding alveolus. Hæmorrhage, in many instances, of an inordinate character, will be entirely avoided by close observance of this injunction.

I herewith append a short account, from notes furnished by my friend, C. J. Carpenter, M. D., of this city, of two cases where compression was used in general surgery, with marked success, in controlling hæmorrhage, in his practice. A. B., admitted into the St. Louis Hospital, 1839, with entire division of the palmar arch by a smooth cut, the hæmorrhage was, in this case, profuse. A compress was laid over the radial artery on the fore arm; the wound was brought together by adhesive straps followed by a light compress; a roller was applied and continued up the limb sufficiently tight to control the hæmorrhage, and yet, not to obstruct the circulation entirely. The bandage was not removed until after the eighth day, at which time the dressing was changed; the wound was found sufficiently healed to allow of the patients discharge.

John Early, aged 35 years, admitted to St. Louis Hospital, in 1839, was laboring under a severe injury of the ankle joint, which had been received some months previously; after consultation with many of our most eminent surgeons, amputation was decided upon, and was

performed below the knee. The common circular mode was adopted; no ligatures were used, and hæmorrhage was controlled by compression with the roller; the stump was treated with the usual simple dressings and a compress over all. The patient was placed in bed, the stump elevated, and the tourniquet loosened gradually. The dressings were not removed until the ninth day, when union by the first intention was very nearly effected, and in three weeks from the day of the operation, the patient left the hospital well. No originality is claimed by Dr. Carpenter in the above cases; the practice originated with a German surgeon, who published, some years ago, many cases, which fully illustrated the entire success of the practice of controlling hæmorrhage, by means of compression with the roller, in amputations, &c., &c.

I had the pleasure to assist Dr. C. in this operation, and I must say, that nothing could have been more satisfactory than the operation and its subsequent cure.

In conclusion permit me to say, that the use of the roller as applied to the same purposes to which it now is applied, can be traced back to very remote antiquity; for in the thirtieth chapter of Ezekiel, 21st verse, we find the following: "Son of man, I have broken the arm of Pharaoh, king of Egypt; and lo! it shall not be bound up to be healed, to put a roller to bind it, to make it strong to hold the sword."

#### EXTRAORDINARY CASE.

Mr. L—— called on me in great agony, caused by some peculiar disturbance in an inferior wisdom tooth, which was decayed deeply on the outer side near the gum. Soon after cleansing his teeth in the morning he was attacked with a violent pain in the above tooth, greatly aggravated by the slightest motion of the mouth. He insisted that the nerve protruded against the inside of the cheek. I attempted an examination, but on approaching the tooth with a little cotton the agony became intolerable. I therefore recommended its immediate extraction, which was easily accomplished, when lo! a small bristle, from the tooth brush, was found to have perforated the pulp and was still sticking there, having undoubtedly done all the mischief.

F. H. C.

#### ACCIDENTAL POISONING.

At Sumter, in South Carolina, Miss Magdalen McAuley, being on a visit at the house of a physician, was seized with a violent toothache, in his absence, and resorted to his medicine chest for means of relief. Finding a bottle containing a white powder, which she supposed to be morphine, she swallowed a small quantity of it; but it was strychnine, and caused her death in a few minutes.

## IMPROVED DENTIST'S CHAIR.

We are indebted to the Scientific American, for the following description of Mr. C. H. Eccleston's Chair, as also for the use of the cut which illustrates it. Although not, in our opinion, the best chair now in use, it has many conveniences for adapting a chair to patients of different height, and for placing them in the various positions required for conveniently and easily performing different operations. Many dental operators are daily breaking down their health and constitutions by stooping over chairs, which are entirely unfit for their use. Every chair, used for dental operations, should have at least two motions, for the convenience of the dentist, one for raising the seat, and one for throwing backward or forward the head. Besides these, if we consult the ease of our patients, there should be another motion, to incline the body backwards, whenever the head is thrown back to prevent painful tension of the muscles on the anterior part of the neck. All these motions are secured by the use of this chair.

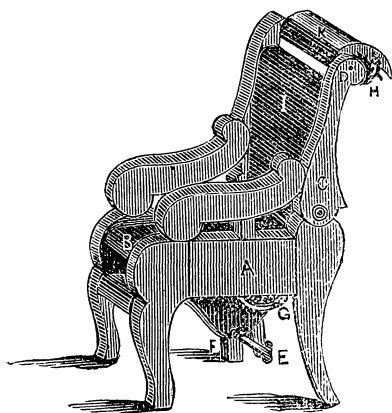


Fig. 1.

This is a very excellent improvement in a Dentist's Chair, invented by C. H. Eccleston, Genesee st., Utica, N. Y. The nature of it consists in adapting the seat to persons of different sizes, also setting back the head to any angle, and the back likewise.

Fig. 1 is a perspective view, and fig. 2 a side section of the joint spring that operates the back of the chair. A, we will call the body of the chair; B, the seat; I, the back attached to the body of the chair by a spindle C, passing through it to allow it to be thrown back by a spring which passes through an eye regulated by a set screw, see




Fig. 2. K, is the head cushion attached to the sides of the back by an axis C. On the axis is a ratchet wheel and on the cushion frame a ratchet which holds the cushion, and also allows it to be turned round to any angle, so that the head may be inclined or held upright, as desired. The bottom is raised or lowered as follows. F, is a vertical rod in the bottom of the chair passing down between two cheeks; in the side of one of them is a set screw E, which will hold F at any point to which the bottom of the chair may be pushed down. G, is a steel

Fig. 2. spring, (there is one on each side), attached to the bottom of the chair, and turning at the lower end over a rod passing through the upper part of the cheeks which are attached to the body of the chair. The springs therefore, have their tension upwards and the set screw E, is to hold the bottom down. For simplicity, and perfect adaptation to the wants of Dentists and the ease of patients, this chair cannot fail to please.

## LETTER FROM MR. J. D. CHEVALIER.

[For the Dental Recorder.]

DEAR SIR:—Dr. W. H. Elliott, in his letter published in the January number, expresses his surprise at seeing his file carrier, published as my invention, and gives the readers of the Recorder, drawings of the two file carriers to show them that they are one and the same thing.

The drawings in the January number, will show all that I have incorporated in my file carrier, of Dr. Elliott's improvement, (i. e.) the buttons. I will say nothing further, here, of my improvement, as it was fully described in Dr. Hawes' communication.

Dr. Elliott, it seems, is not aware that the file carrier has been in use at least, sixteen years, and that I have made many with the offset to admit the cheek, (an improvement which he claims to have made in September, 1847,) since 1843, though it was not my invention.

The communication that appeared in the October number, was put in by Dr. Hawes, without my knowledge; but, I return my thanks to him for the compliment paid me, in thus bringing my improvement to the notice of the Profession.

JOHN D. CHEVALIER.

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# NEW YORK DENTAL RECORDER.

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FEBRUARY 1, 1849.

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## AMERICAN SOCIETY OF DENTAL SURGEONS.

Since the publication of our last number, the American Journal for October has come to hand, containing a synopsis of the proceedings of the American Society of Dental Surgeons.

The Society convened at Saratoga Springs, August 1st, and during the session there were present twelve members, but letters were read from several others, giving special reasons why they could not be present at the meeting.

The Executive Committee prepared the following order of business: 1st, To hear the report of the Committee on Practical Dentistry. 2d, General discussion of practical subjects. 3d, Election of officers.

Dr. C. O. Cone, Chairman of the Committee on Practical Dentistry, had prepared a very long report, the reading of which occupied several hours; this report is published entire in the Journal, and occupies more than eighty pages. We shall take another opportunity to review its contents.

The first practical subject discussed, was the filing or otherwise separating the teeth as a preparatory step to filling. During the discussion, Dr. E. Parmly, by request, gave the origin of the application of wedges for separating the teeth. Much of the time, during the session, was occupied by the discussion of practical subjects; all of these discussions were noted by a reporter, employed by the Society, and will probably be published in the Journal.

“Dr. Asa Hill having expressed a desire to make some communication in regard to his gutta percha stopping, he was called upon to do so. But it appeared very soon, that instead of wishing to enlighten his brethren in regard to the compound, he only wished to bring to notice its virtues. After Dr. H. had proceeded so far as to make his object fully apparent, he was asked whether he intended to give to the society or to the world, his receipt. To this he replied that he was *not at liberty at present* to do so, being equally concerned with another individual, whose interest he could not compromise. The question was then raised, whether it was proper for the Society, to listen to the mere recommendations of his secret compound. This was soon decided in the negative, and the Doctor deferred his remarks till after the Society should have adjourned.”

Before proceeding to the choice of officers, several resignations were considered. The first was that of Lewis Roper. This was unanimously accepted. The report then goes on to say:

"2. Was that of *C. C. Allen*. It was moved and seconded, that his resignation be accepted, on his complying with the requirements of the constitution, in paying his dues."\*

The society then proceeded to the choice of officers, (see No. 4, Dental Recorder). The Executive Committee, (which we did not publish), consists of J. H. Foster, J. B. Rich, E. J. Dunning, E. Parmly, J. M'Ilhenny, C. A. Harris and H. N. Fenn. The following were appointed to deliver addresses at the next annual meeting. S. P. Hulihen, (opening address), Drs. Westcott, Foster, Harris, Dwinelle and Cone.

The committee on Practical Dentistry consists of Rich, Maynard and A. Nelson. A committee on Dental Literature and Education was also appointed, consisting of S. P. Hulihen, C. A. Harris, and Robert Arthur. Three members of the society, Drs. Maynard, Westcott and Foster, were also appointed delegates to attend the National Medical Society.

Although the society has killed amalgam stone dead, its ghost still continues to haunt the members. Drs. Bissell, G. W. Parmly and Dr. Jas. Taylor were held in durance, for another year, they having failed to answer the "mandate" issued by the society. Dr. Thos. Cleveland, having "retired from business," tendered his resignation, and was elected an honorary member. The resolution passed last year, declaring it dishonorable for members to hold either secrets or patents in the business of Dentistry, were repealed. Dr. Cone was requested to have one

\* We are unable to understand the meaning of this condition upon which the resignation of C. C. Allen was accepted. After carefully examining the original and amended constitutions, we cannot see that there is any particular form for a member to follow "*in paying his dues.*" The following is the language of that document, as amended, *by stealth*, in 1846. "He shall also pay, as annual dues, the sum of two dollars and fifty cents at every annual session thereafter." Art. 4th, Sec. 5th, also provides that, "When a member of this society desires to withdraw his membership, he shall signify his desire in writing, (this Dr. Allen did in Feb. 1848), accompanied by his certificate of membership or diploma, (this he never had), and if no charge is preferred against him, (this is not intimated), he shall be entitled to withdraw," &c. Now as to the annual dues, the following, which is a true copy, will speak for itself.

NEW YORK, July 28, 1848.

Received from Chas. C. Allen, Two Dollars and Fifty Cents for annual dues to the American Society of Dental Surgeons, up to August 1st, 1848, and Five Dollars for subscription to Vol. 7th American Journal and Library of Dental Science.

(Signed,)

C. A. HARRIS.

If the above report was intended as a slur upon Dr. C. C. Allen for tendering his resignation without paying his debts to the society, the society is welcome to all the honor that will accrue to it for having attempted to put Dr. Allen in this false position before the readers of the Journal; but if not, we shall look to the Secretary or Treasurer for a correction of the report in the next number.

hundred copies of his tabular sheet printed for the benefit of the members, upon which they were requested to record their cases, and return the same to him by the first of May next. The Corresponding Secretary, to whom was assigned the duty of addressing the honorary members to ascertain whether or not they used amalgams in their practice, reported progress. The Society adjourned to meet again at Saratoga Springs, the first Tuesday of August, 1849.\*

On reviewing these proceedings, we are surprised at the very small numbers who take interest enough in the doings of the society to attend the annual meetings. During the last four years, when great discord prevailed among the members upon the subject of the use of amalgams, this was a sufficient cause to deter many from entering an arena, where they might feel compelled to take part in a strife which they would gladly avoid, and this was their excuse for staying away, but, now that this subject has been so effectually disposed of, by the "dissecting knife," we have been told that the meetings would be fully attended, and new members would flock in. Instead of this, however, we find the whole number in attendance less than a baker's dozen, and no new candidates for admission. We have been present at every meeting for several years, except this last, and have seldom seen, during the session, less than thirty members in attendance. The few who were present, we doubt not, enjoyed a very "refreshing season," and much of the bile and bad blood which have heretofore exhibited themselves, have now been changed to the pure milk of human kindness. After three years of quarreling, the members have again commenced the legitimate business of the society, viz: "to advance the science by *free communication and interchange of sentiments*." If the society had never by its acts, perverted this motto, it would long since have done much "to promote union and harmony among all well informed Dental Surgeons," instead of throwing a firebrand among them.

Much of the time, during the late meeting, appears to have been spent in discussing practical matters, and we hope that these discussions will be published and have the effect to improve the practice of many of our profession. It is time the society did some good.

The election of delegates to attend the National Medical Society we regard as a favorable move, and recommend to other societies of dental surgeons to do likewise. If dental surgery is

\* We have not followed, in the above abstract of proceedings, the exact form in which the business was transacted; but have given the substance, in the order laid out by the Executive Committee.

one of the specialities of the science of Medicine, it is desirable that its practitioners should be enlightened by a knowledge of the principles of the science and be made acquainted with the great movements which are going on throughout the country and the world, for the advancement of correct principles and practice. The Medical Association evinced a just appreciation of dental surgery, by admitting the delegates of the Baltimore College of Dental Surgery at its last meeting, and we hope it will follow that precedent by fellowshiping with those who may be sent by the dental societies.

Another good move made by the American Society has been to appoint a committee on Dental Literature and Education. Much of the literature connected with our art, is the veriest trash that has ever been published. We do not allude now to the poems and popular treatises that have appeared—

“The earth has bubbles, as the water has,  
And these are of them—”

but many of the graver works, written ostensibly for the purpose of enlightening the profession upon matters of science, involved in their practice, have been unworthy of a place in a respectable medical library. We hazard nothing in saying that, but for the great demand for practical knowledge among the neophytes of our art, most of these works would have remained still-born upon the shelves of the publishers. A good practical work upon surgical and mechanical dentistry, embracing the latest improvements, is still needed, and this committee, together with the one on practical dentistry, can do much towards collecting the materials for it.

Upon the subject of secrets and patents, the Society has undone all which it did at the previous meeting. When the resolutions declaring against the practice of securing patent rights for improvements, and keeping secret any peculiar practice, in dental surgery were introduced, they were voted without debate and without one dissenting voice; but the society has now found that they were “too general in their scope,” and instead of amending them, so as to make them what they should be, the whole were repealed. This is taking the back track, and, if not encouraging, is certainly permitting a course of conduct which the report of the proceedings indirectly censures in one of its members. If the society fellowship a member who vends secret mixtures for filling teeth, it is certainly a breach of privilege not to allow him to defend its virtues, after those virtues have been questioned.

The committee appointed to catechise the honorary members upon the subject of amalgam, and to ascertain whether they used

it, or not, "reported progress." One year, with the present facilities for crossing the Atlantic, we should think was ample time to receive replies from the European members, but perhaps those members do not feel, that the honor of membership is to them a sufficient inducement to notice the threat which the expulsion of Mr. Brewster virtually holds out to them. Mr. G. W. Parmly retains membership without signing the "protest"—"he being still out of the country;" for the same reason the cases of foreign honorary members should also be suffered to lie on the table. Although we may be told by members that it is none of our business, we confess a little curiosity to know what the Society will do with those distinguished foreign members who not only use, but advocate the use, of amalgam. Mr. Cartwright, it is true, has retired from business, but if he did actually attempt to "poison" the Queen, by putting one or more amalgam fillings in her teeth, ought not the American Society of Dental Surgeons to do its duty, although Parliament and the Pope have neglected theirs, and pass the highest sentence of condemnation upon him, which their law allows? We shall see what course it will take.

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#### THE FILE CARRIER.

It will be seen by the communication from Mr. Chevalier, that it is not his wish to deprive Dr. Elliott of the credit of the improvement which he has made to the file carrier. That improvement is the buttons. If we suppose the concave, grooved buttons of Dr. Elliott's file carrier applied to the one in common use, of which Mr. Chevalier speaks, we have an instrument like Dr. Elliott's, wanting only the spring. These buttons, which hold the file in any desired position, alone, make the instrument applicable to either side of the mouth, and are in fact a great improvement upon any carrier we have ever seen. The offset for the cheek, of which Dr. E. speaks, has been made in file carriers for several years, and also in the files, for separating molar teeth, manufactured by Mr. Murphy, of Philadelphia. Dr. Hawes did not know of Dr. Elliott's improvement when he furnished the communication and drawings for the Recorder. It was for this reason that we appended the remarks which follow it. Dr. H. now suggests, in turn, an improvement upon the buttons, which is, to have them rotate in their position so that, by loosening the screw, the file may be turned to any desired position, without the trouble of removing it from one groove to another. When the screw is tightened again the friction of the flat side of the button against the corresponding side of the jaw, he thinks, will be sufficient to keep it from turning. The spring may answer the same purpose if made stiff enough.

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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Vol. III.

MARCH 1, 1849.

No. 6.

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## DENTAL CARIES, &c.

BY HENRY VILLERS.

To the Editor of the Dental Recorder.

In your last January number of the Recorder, beginning page 83 and ending page 87, headed Dental Caries—your Critic I think most judicious in all its bearings, and I take the liberty to give you my experience of thirty years practice in the Dental Profession, on this seemingly knotty subject. I do not write this without having had ocular demonstration on this subject, and it is as clear to me as noon day, and I think it will be so to every enlightened mind, as regards the teeth in their various changes of nature. The judgment you have always shown as editor, in all the numbers of the Recorder that have come under my notice, convinces me that we are all improved by the judicious hints and practical knowledge you possess on the various subjects which have employed your editorial pen. Therefore I lay it before you and hope you will give it a place in the Dental Recorder at your earliest leisure.

DENTAL CARIES.—Caries always commences in the Infant state when the ova of the second dentition are in fibrous and gelatinous sacks. In this state the tooth is first affected, which is caused by a high state of inflammation of the sack, and its adjacent parts, and is sometimes produced by scarlet and other fevers, as in the small-pox and measles. The reasons are very simple, which are these: The juices and gelatine of the sacks of the ova (of the second set) are dried up by the extra heat of the first dentition and the fangs and body of the first teeth, which supply the ova of the second teeth with the nourishment and lime that nature has provided for this purpose, dry up the gluten and moisture in their own substance, and instead of imparting it to the ova receive back a portion of moisture from them, thereby causing the ova to glue themselves to the fangs of the first teeth and become dry and rigid, from which state they never afterwards recover their pure vitality.

Hence it is that the holes are found in the sides and crowns of the teeth as the lime of the second teeth while in ova is deprived of its gelatine and gluten. As a proof of what I now assert, you sir, and every practical dentist, must have seen the enamel of the upper and lower front teeth variously marked with indentations of a rough, dark appearance, and sometimes the enamel drawn completely down from the bony substance of the tooth. This is caused by the edges of the alveolar socket pressing and absorbing the moisture of the second teeth in a more advanced stage when the disease attacks the patient at a much later age; and, again, you find a decay in a full grown adult in the eye and molar teeth, on the fangs below the enamel, this also was caused at a still later period of life, when the teeth became more dense and harder in their substance, and of course does not show itself so soon as those before mentioned. I had many valuable specimens in 1834 which were lost by shipwreck with all my instruments and other property. I believe, previous to my loss, I showed them to Dr. H. H. Hayden, an eminent dentist in Baltimore, Md. and many others whom I had the pleasure to teach the manufacturing of mineral teeth. Among the specimens were all the different stages above alluded to, and amongst which were two front teeth of the lower jaw united together their whole length, perfect in all their parts, (as spoken of in a valuable work on dentistry by Dr. Koecker.) This was caused by the same freak of nature as the above, assisted by pressure and a high state of inflammation of their parts.

**IVORY FOR ARTIFICIAL TEETH.**—That used formerly by Dentists was of three kinds, viz. the hippopotamus tusks, the molar teeth of the sperm whale, and the tusks of the elephant. The two former are the best for dentists use; the first on account of its enameled surface, and the second on account of its greater durability in the mouth. I have some old pieces that have been worn to rottenness, of every species of ivory. When a piece of ivory is left rough and spongy in working it, it will decay in holes between the teeth, similar to the decay of the natural teeth; and where the holes are drilled they decay much faster. But take a molar tooth of the sperm whale and carve a set of teeth from it, and it will not decay in holes but will remain sound three times as long as the enameled ivory, and six times as long as the elephant's tusk ivory. The reason is plain. It is placed back into the mouth and exposed to the heat and moisture in its own natural situation. And so with the two other kinds of ivory: place them out of the mouth and they will outlast sperm whale ivory, and *vice versa*. The hippopotamus and elephant tusks are both hard and dry substances. The latter ivory is coarse and much softer than the former ivory, decays much sooner, and becomes a disagreeable sight in the mouth; but when teeth are made with either of these, they are not equal to the sperm whale molar tooth for durability.

**WOOD FOR PIVOTS.**—Wood for pivots, in like manner with the above ivory, as to its fitness or durability for the uses to which it is

put, ought to be considered. I have used formerly highly seasoned hickory wood for pivots, to engraft artificial teeth upon the remaining roots. Well, the consequence was, when in the mouth, the moisture and heat caused the wood to swell at first for a while, and then the pivot decayed, loosened, and came out. The reason is, the tree it was taken from grew above ground, exposed to the seasons—but the wood I have been using these past fourteen years, is from hickory that was grown under ground, and some of the pivots have remained firm in a sound root twelve years without coming out once. I received a good supply of this wood when last at New Orleans, in 1834, which was brought from the Red River by an Indian, (they making their bows and arrows of it,) and which, as he informed me, was grown in the following manner:—When a young sapling is three or four years old, a trench is dug in the ground, commencing near the base of the sapling, about a foot in width and depth. The young sapling is then bent down into it and the earth replaced over it, leaving the top of the tree about one foot out of the ground, and laying the sods over the body as before the trench was dug. It is suffered to grow in this way until fit for use. This you see is always kept moist, and is not materially injured when placed in the mouth.

### A FEW REMARKS ON DR. CONE'S REPORT.

BY E. BAKER, D. D. S.

At a meeting of the Dental Society convened at Saratoga in 1847, a committee was instituted "whose duty should be, to make an annual report of the improvements made in this country in the management of disease coming within the scope of the dental practitioner, and the condition and progress of dental knowledge in America during the year of their service," and in accordance with said resolution, Dr. Cone, as Chairman of that committee, made a full, and in most respects quite a creditable report, at the last annual meeting.

Had the Doctor, (or perhaps the committee) confined himself to the record, there would not at this time have been any occasion for remarks. But he has thought proper to allude to the "history and doings of the association," from its commencement, and thus supererogatively *endorse* said doings. However complacently he and the little remnant of the Society may look on their past proceedings—a very large and respectable portion of the profession view their acts in a very different light.

After a few preliminary remarks, he recapitulates the *text* contained in the preamble of the original constitution of the Society, viz. "to advance the science (dental surgery) by free communication and interchange of sentiments, either written or verbal, and in fine, to give character and respectability to the profession, and establish a line of distinction between the truly educated and uneducated." Have they followed this catholic and liberal sentiment, without a due and

proper respect for which no association of free, respectable, and enlightened men can exist? Have they allowed the collision of opinion with opinion, of argument with argument, so that the spark of truth might be elicited to guide us into the right path? Quite the reverse—after awhile, that portion of the society who had indulged a narrow and illiberal spirit, forgetful of the spirit in which all well regulated societies are conducted, settled down into complete dogmatism, from whose opinions it was rank heresy to swerve, falling into the same error that medical men and societies did a hundred years since, when they proscribed medicines which are now found to be most useful. Now, in the medical profession, every one is at liberty to construct his own articles of faith, and to shape his practice accordingly.

"Nothing," says Sir Humphrey Davy, "has so much checked the progress of knowledge, as the confidence of teachers in delivering *dogmas* as *truths*, which would be presumption to question. It was this spirit which for more than ten centuries made the creed of physics of Aristotle, the Natural Philosophy of the whole of Europe. It was this spirit which produced the imprisonment of the elder Bacon and the recantation of Galileo"—and it is this spirit which has occasioned the withdrawal or expulsion of a majority of the most respectable portion of the members of the American Society of Dental Surgeons. It is unnecessary to mention the debasing and humiliating machinery made use of, such as pledges, &c. &c.

This cup of humiliation was rejected even by those who were averse to the use of an amalgam under all circumstances, as a filling for the teeth. Nearly all of the West, South, and indeed all parts of the country abjure such dictation.

To show the sentiments with which those arbitrary acts were regarded, I will quote a few passages published in the Dental Register of the West, by one of its editors, Dr. B. B. Brown, of St. Louis. On October 20th, 1845 he writes to Dr. Westcott—"the printed resolutions and blank protest of the A. S. of D. S. were received in due time. In reply, I have only to say, that my professional attainments and character occupy a higher ground than to be compelled to forfeit my self-respect, by submitting to the requirements of resolutions whose *tone is threatening*. The society has transcended its powers, has violated the compact which ushered it into existence, by enacting resolutions which are arbitrary, unjust, and unconstitutional; and I believe, unless they are abandoned, the fate of the society is sealed [a true prophet] or I have mistaken the signs of the times." Again, "I do not use any amalgam or cement whatever"—"when the society recommended the profession to abandon the use of amalgam and cements for the purpose of filling teeth, it did not travel out of the bounds of its duty, the recommendation was right and proper, and every high minded and honorable practitioner of dental surgery, whether a member of the society or not, I venture to aver, was to be found on the side of the society and opposed to the general use of amal-

gams,\* cements, &c. &c. but when the society declare the use of those objectionable materials to be *empiricism*, it goes one step too far." . . . "In conclusion, I will say that my membership of the society does not, I humbly trust, rest upon such a doubtful foundation as to subject me to the liability of expulsion unless I sign a *certificate* and make a *pledge*. When a member has been supposed to have violated the constitution and bye-laws, he should be arraigned under their provisions, and, if found guilty expelled. I will now rest the matter for the present, and await the issue."

In answer to a private letter written by professor Harriss, Dr. Brown writes—"My opinion has undergone no change. . . . The temperate and elegant letter of Dr. C. C. Allen, which was published in the Journal, vol. vi. beginning at page 246, embodies my own views and sentiments as fully, and probably more so than I could hope to express them. The belligerent views, to say nothing of the sophistry which they contain, published in the Journal from time to time relative to amalgams—protests of the society, &c. I conceive are uncalled for, to sustain a tenable position, nor are they calculated to advance the interests and dignity of the dental profession.—St. Louis, July 14th, 1846."

The society becoming in some measure conscious of their untenable position, and not being able to dragoon its independent members into their measures, in the following year compounded a milder "*Pride's Purge*,"\* omitting the ingredients, "*not only unfit but dangerous*"—thus gilding the pill only; but pertinaciously insisting on effecting their object. To this second protest Dr. Brown answers: "I regret that this second form is even more objectionable than the first; rendered so, I must confess, by the obstinate repetition of the subject. Every formula which requires the members of a learned profession to be *pledged*, like lost drunkards of a temperance meeting, is, in my humble opinion, an outrage on the profession itself, and revolting in the highest degree, to the personal dignity of the gentleman and the scholar." . . . "All attempts to interfere in this objectionable manner, with the *catholic spirit* which animates the profession, must terminate in arrant quackery, and force the society into the unenviable position of being the laughing stock of the more intelligent and respectable portion of the community." How completely has this been verified. "The dark cloud of error can alone be dispelled by able and gentlemanly discussion, carried on in the spirit of

\*This is true, for in 1845 every member was ready to, and all present at the meeting did, abandon the use of amalgam, that they might be united and prosperous; and had not a few foolish members, who had previously determined that their word should be the law, insisted upon the protest being signed by all those who had used amalgam for years—an act by which they would have acknowledged their own malpractice—the subject would have rested here.—ED. REC.

†Vide the proceedings of the Rump Parliament. . . .

candor and forbearance towards every member of the profession. The day has long since passed away, in which the *ipse dixit* of any man, or even a dozen men, can authoritatively, and *ex cathedra*, stamp this opinion as heterodox, or that practice as quackery." . . . "Science is open to the investigation of all men, and he who will not apply some of the results of his investigations to practice, is at least but a poor student, and must always remain a very indifferent practitioner. I deprecate the use of amalgams in dental practice, having long since tested their claims to usefulness, and their character by experiment and analysis. I hope and trust that you will, my dear friend, [Dr. Harriss] move to lay this whole matter, in relation to amalgams, upon the table, thereby rendering the dental profession a lasting service, and adding another leaf to the chaplet of your well-deserved fame."

How vain, in its effects, was this eloquent and earnest appeal!—and the society, though getting very *weak*, "made no sign" of grace, but madly persisted in proceeding to the last extremity.

Such being the sentiments of Dr. Brown, and, as is well known, of a great majority of the members composing the society of the Mississippi valley of dentists who disapprove of the use of amalgam under *any* circumstances, what must be the opinion of those who certainly are as competent to judge, and who sincerely believe that such a compound is not only perfectly safe, but, in a variety of cases, indispensable? What must be the opinion of *this* class of the profession, as regards the action of the A. S. of D. S.? A class composed of the best talents of England and France, and a great portion of the first among their equals in these United States. Time and space allow but a brief notice of Dr. Cone's late Report. He alludes to the action of the society at its second annual meeting, when, he says, "they placed their seal of disapprobation on the use, by the profession, of all substances for filling the teeth, composed in any part of mercury, &c." This amalgam hobby was mounted by a particular member at that time requesting the action of the society on a subject they knew little or nothing about. This was indiscreet—a sin of ignorance—but they legally could go so far, and no farther. In passing on to the sixth annual meeting, the Doctor says—"Much of the time of the society was taken up in endeavoring to ascertain how far its members practised in accordance with the expressed sentiments of the association; and it adopted some caustic resolutions, and imperative demands upon its members, and penalties in case of a refusal. The action of the society, in this particular, was censured by many well-wishers of the profession. But it can easily be seen, when dispassionately and impartially examined, as being not only an act of justice, but one of right and power."

Here then the Doctor endorses the action of the society, when they break out into overt acts of tyranny and oppression. It was at this time they sent forth their mandates, decrees and pledges. It was at

this time they formed themselves into what may be called a "*Holy Inquisition*," and sent a committee of *familiars* to inquire into the professional practice of absent members, in the city of New York, and report to the holy tribunal! At the seventh annual meeting, the Doctor continues—"The first business of the association was to examine into some *empirical* proceedings on the part of some of its members, and ascertain the compliance of the same with its demands"---thus calling all those *empirics* who independently practice agreeably to their own ideas of duty and experience! It was at this meeting that the modulated second pledge was sent forth.

After adverting to the "*change*" in the constitution\* at this meeting, and the new regulations admitting members, the Doctor continues---"Thus it is seen, that if the society, by accident or imposition, held in communion [pure church] such as were not worthy, it was fully determined that it should not longer offer means of further admission of such, but like the pure liquor which has thrown off the scum and filth with which it was early mixed, should be replaced by that which is pure in quality, to ripen on its lees." Now this is a beautiful figure of speech as well as very modest! but the Doctor's *distillery* has operated differently from what he imagines. By means of this alembic, the ethereal and spiritual members of the A. S. of D. S. are freed from it, and the "*lees*" and dregs remain, soon to become a *caput mortuum*.

In continuation he says---"At the eighth annual meeting, the early part of the session was occupied in dismissing (?) from membership a number who refused to comply with the requirements of the society." But Dr. E. Taylor, of Cincinnati says they fell in accordance with those sanguinary and *unconstitutional* sections of law, called the Axe, or broad-axe and Bowie knife sections, and with those instruments---rejoicing that they were found worthy to bear testimony in so good a cause---knowing, as the "blood of the martyrs was the seed of the church," so truth is eternal, and the principles for which they contended would flourish to the end of time; and when the tyrannical acts of the society would exist only in unenviable fame.

A resolution, in 1846, was adopted by the society, to prepare a code of *ethics*! and a committee was appointed for that purpose, and the Doctor remarks, "it is to be regretted that the committee to whom this duty was assigned, has not yet been able to complete their labors and report, and he asks the attention of the society to the consideration of adopting some clause or feature to such a code of ethics, that shall determine the members when and with whom to exchange professional courtesies." Now, is it at all wonderful that this committee should have been in *labor* more than two years, and have not "brought forth" even a---"*mouse*?" Insurmountable difficulties

\* The constitutional proceedings of this society will be noticed in a future number of the Recorder.

prevent its progress---well knowing that such a code as is adopted by civilized and honorable societies, would be in direct opposition to the late monstrous acts of this society, and should they report, "out of their own mouths they would be judged." Before aspiring to the higher branches of moral philosophy, such as to a code of professional ethics, would it not be well to understand the amenities and "courtesies" of common life? Nothing is more amiable than to *show*, at least, a deferential respect for the opinion of others; especially if they be brethren of the same profession. *Be not wise in thine own eyes.* Seest thou a man wise in his own conceit? Isaiah pronounces a woe against such men, (Chap. 5: 21,) *that are wise in their own eyes and prudent in their own sight.* Many men, saith Seneca, *had been without question wise, had they not had an opinion that they had attained to perfection of human knowledge already, even before they had gone half way.* The Chinese say we have but one eye, they themselves two, all the world else is blind. So, in effect, says the society, now reduced to less than a baker's dozen in number, of active members.

It appears that more than a year since, the secretary of the society, (at Saratoga) was directed to address the honorary members in Europe on the subject of amalgams, sending the pledges, no doubt, to be signed, or be "*dismissed*" in case of refusal. (Dr. Brewster is already *dismissed*.) But the secretary only reported progress---wonder what the *progress is*. Do those high minded, honorable, and scientific gentlemen, viz. Messrs. Cartwright, Nasmyth, Edmonds, and Bell, of London, Nasmyth and Jobson, of Edinburg, Brewster, Delabarre and La Marie, of Paris, and a number of others, all of whom use amalgam "in certain cases," tolerate such an insult? Gentlemen, each of them, of more science than perhaps any one in this country; invited into the society on account of their great worth and talents: then to be questioned about their practice---"*gentlemen take your choice---recant, subscribe, or be kicked out!*" This caps the climax of all the barbarous or boorish atrocities committed in what are called the dark ages! and we may well blush for our country!

N. B. Tomes' Lectures are publishing in the Baltimore Journal, wherein he recommends amalgam in certain cases---and without a word of comment from its editors!!!

## PLUGGING TEETH.

Continued from the Dental News Letter.

*Messrs. Jones, White & Co.*

GENTLEMEN—The favorable reception that my first communication has received, is a sufficient apology for me to furnish you with a continuation of my last article on *The Formation of the Cavity for Plugging*. For this purpose numerous small cutting instruments are necessary, not only to approach all parts of the cavity of decay, but

to enlarge it in any desirable direction ; for it is not to be presumed that the freaks of decay will always form a cavity best suited to retain a plug ; besides, gold foil cannot be consolidated, unless as fast as placed in the cavity, it is embraced by its parieties more and still more firmly at every effort with the instrument. Yet it is not indispensable that it should do so in every direction, or when only the first portions of the plug are introduced. A very good and simple method for a young learner to adopt, when he has dressed the margins of the cavity, is to lay a straight instrument across them, and then to cut down at right angles from it ; in this way he is sure to give the cavity a proper shape ; in short, it is the business of the dentist to shape the cavity to suit himself, so far as it can be done without injuring the tooth. 'A cavity best suited for plugging is where the parieties run from the orifice to the bottom, parallel to each other ; and this character should always be obtained as far as practicable upon the coronal extremities of the teeth, especially when they are disposed to wear down. What are commonly termed the hatchet-shaped, and scoop or hoe-shaped instruments, of different sizes, bent at different angles are necessary ; they can be obtained ready made, but every dentist should be capable of shaping the points and tempering them to suit himself ; it is impossible for the instrument maker to judge of and produce the various niceties of temper and shape which these instruments require. Small flat drills, for drilling catches for the plug upon different parts of the cavity where they can be applied, are also requisite. The following is a very easy and effectual method of tempering this kind of instruments : First file and bend the instrument suitably, then heat it a very little above a cherry red in the flame of a spirit lamp, and suddenly plunge it into cold water, (or sealing wax, which is perhaps better,) placed close enough to the point while heating, to prevent it from cooling much in passing from the flame to the water ; now it is as hard as it can well be made, and to exert much force by bringing it in contact with any hard substance would break it almost as easily as glass, to prevent which, polish one side of the point upon a stone, so as to distinguish the slightest tinge of change in color ; then place the neck of the instrument again in the flame, with the cutting edge jutting through about half an inch, and impinging upon a piece of cold steel ; held in this position a few moments, the polished surface of the instrument will be observed to change to a light straw color, which will deepen until it turns blue ; when this light straw color reaches the point of the instrument, it should be again plunged into cold water ; now polish the instrument, and it is fit for use. The reasons for this process of tempering are obvious ; it is desirable to make the neck, and especially the angles or curves of the instrument, of a light blue color, which is spring temper ; as it is important that it should yield to pressure without breaking, and that it can be slightly bent at pleasure to suit any temporary purpose, and at the same time the cutting edge should be very hard. As the

edge is much thinner in most cases than the neck, the same amount of heat that would render it light straw color, would not be sufficient to reduce the neck to a blue, but the cold steel in contact with the point conducts off the heat whilst sufficient can be applied to the neck to turn it blue. In this way the temper can be so regulated that the edge can be extremely hard, while the instrument will bend up to the eighth of an inch of the point; so that we can cut the hardest tooth substance as with a diamond set in steel, without its breaking.

*Characteristics of Decay.*—On this subject authors differ very widely; and while we do not wish to be understood as attempting to settle this difficult question, still a few remarks upon some of its properties, &c. may not be out of place; it is asserted by some that every particle of *decay* must be removed from the cavity preparatory to plugging, (to this we most heartily assent;) and by others that every vestige of *colored* substance must be removed, that the tooth may present a white and healthy appearance! Now whiteness is not always a healthy sign, as sometimes the softest decay is whiter than other parts of the tooth; nor again is a black appearance always a sign of decay. How is it with the dark and polished surface of stationary decay, so called, and which is more dense than the sound tooth? The tubuli having filled up with some kind of matter rendering the dark spot frequently less destructible than the surrounding tooth substance. Examine such cases after being stationary for years, as is the case sometimes, and when decay again commences, it is either by a white and softened margin, or by a whitened centre. While tooth substance is changing from a healthy state to a state of decay, it is not black, but white, brown, or yellow, as the case may be; but it often becomes black after it has partially decayed. The tubuli take up fluids which *become* colored, or coloring *matter* is imbibed from the decay without the structure of the tooth being at all broken up; that they are capable of doing so, is proven by immersing a tooth in the tincture of red saunders, which will color it as dark as dark mahogany; but the tooth never turns white without a loss, or breaking up of structure; so it will be seen that color is not an invariable criterion to judge by, whether a tooth is decayed or not; but texture combined with opacity and discoloration is, except when we approach the cementum, *it* being about the same texture as partial decay. It is well known that in many cases where the decay is discolored, a dark line is observed running along the tubuli, from the decayed portion, almost as soon as it is through the enamel, down to the pulp cavity. I will cite a single case as an illustration. A gentleman who had been residing for some time at New Orleans, accompanied his sister to my office, who was having her teeth operated upon, and while there expressed a regret that he could not have his teeth plugged also; and upon inquiring the cause, he informed me that the nerves always had to be exposed by cleaning the cavity, and it was so painful that he could not bear it, and even if he did, that his teeth be-

came diseased at the roots, and had to be extracted. I requested him to allow me to examine them; he assented; and, upon examination, I remarked at once that I could plug them without exposure of the nerve by cleaning; I convinced him that the dark portion of his tooth was as hard as the white, and to remove that which had lost its density of structure was sufficient; this has been done, and many valuable teeth saved for years. This darkened character of the tooth substance is not uncommon in tobacco chewers, and it is obvious that as the tubuli of the tooth run from its periphery towards the pulp cavity, that when the impervious enamel is removed by any cause, they will take up coloring matter of any kind, and become discolored. Others assert, again, that partial decay may be left in the tooth, that decay will not go on if the cavity be plugged solid. It is not impossible that the partially decayed bone will not become hard again by infiltration of calcareous matter from the pulp, in the same way that the cementum is formed; but it is not often true that decay will not go on when a tooth is plugged in this way, because there are sufficient heat, moisture and air pervading at all times in the tooth to favor chemical decomposition when a nucleus of decay is once formed, yet decay may not be as rapid as when the tooth is not plugged. Now it is almost needless to say that the instruments used for cleansing and forming the cavity should be as thin and sharp as possible, and have sufficient strength to bear slight pressure, because the decay, as well as the sound bone, is sometimes exquisitely sensitive to the touch,\* and to attempt to prepare a cavity with a thick and dull instrument in such cases, would excite undue and unnecessary pain; besides the sharper the instrument, the more readily the difference in the texture of the decayed and sound bone is distinguished. A small lock of cotton, lint, or napkin, should be held in the hand, to wipe the decay from the instrument as fast as it is taken from the tooth, as well as to wipe it from the cavity and from about the tooth, in order to keep it out of the mouth as much as possible.

*Material for Plugging.*—Great care is necessary in selecting, as well as for preserving, material for plugging. It should be kept in a dry place, and a weight placed upon that which is not wanted for immediate use, in order to prevent the air from getting in contact with it, as it will render it more or less brittle and dusty; by leaving it exposed to the air, it loses a peculiar freshness, which renders it less capable of being firmly packed. What is commonly termed No. 6, is better suited, perhaps, for general use than any other thickness, because it is not too stiff or strong to be packed into a cavity where the parietes are weak, nor too light to make a very hard and compact

\* We do not intend to give any directions with reference to the treatment of this condition of the tooth, or the treatment of the pulp, as it is too important a subject to be treated without a due consideration of its physiological and pathological conditions, to do which would interfere too much with the arrangement of the present papers.

plug in a cavity better supported. But we apprehend a great deal may depend upon the habit of the operator, because some prefer No. 4, and others 15 or even 30 grains to the leaf. It is generally asserted that the lighter leaves should be used for the small cavities, and the heavier leaves for the larger ones; but we are in the habit of using the thicker leaves for the smaller, and the thinner leaves for the larger cavities, for the reasons given above; the lighter leaves can be firmly packed with less force, but they require a longer time than the heavier ones, and when the cavity is very large the parieties are weaker than when it is small. It is believed by some that gold cannot be used with the same success when the cavity is badly shaped, or the tooth frail, or when there is a very small hole for the plug, as tin; we must confess we were once of the same opinion also; but that opinion had been partly formed by consulting the views of others, and from transient experience; but practice and a better knowledge of packing gold, have led us to a very different conclusion. It is obvious that gold is best, under all circumstances, and that tin should not be used except as a temporary filling, or a matter of economy. Tin may be rendered impervious to air and dampness, but it will corrode in most mouths, unless it comes in contact with the food in chewing, and then it rapidly wears away, as it does not become hard by packing or under pressure, as is the case with gold; in other words, gold will become hard and brittle by hammering, and tin will not. This is the principal reason why gold can be more successfully employed in a cavity where there is a very small hold than tin; because it is clear that a small hold with a hard metal, and one that can be made harder proportionate to the pressure applied to it, is more secure than it would be with a softer metal; and that tin "forms a kind of union with the tooth" differing from gold, is too ridiculous to be more than mentioned; and that the walls of the cavity are not strong enough to bear the pressure of consolidating gold, is equally so; if the tooth will not bear much pressure, use thinner leaves. We are sure that No. 4 can be firmly packed with as little pressure as can tin; but the gold must be well prepared, not only of uniform thickness, but pure, malleable, and properly annealed; all this requiring care on the part of the one who prepares it.\*

J. D. WHITE, M. D.

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#### TANNIC ACID.

Tannic Acid is prepared from gall nuts. For toothach, combined with the sulphate of morphia in the proportion of two parts of tannin to one part of morphia, and applied dry on cotton, it forms one of the best preparations in use.—*Dental News Letter*.

\* We use the gold of Mr. Charles Abby & Son, No. 22 Pear street, and feel it a duty to say that it is more uniform in its peculiar qualities than any other which we have ever tried. It is but fair to add, however, that we have never tried that manufactured by Jones, White & Co.

## ANOTHER DEATH FROM CHLOROFORM.

The coroner held an inquest on Saturday, January 20th, on the body of John Griffen, a native of Ireland, aged thirty-one years. The deceased was a sailor, and was admitted into the New York hospital in December, he having at the time a chronic diarrhœa and hemorrhoidal difficulty. He was cured of the diarrhœa, and on the 19th of December he was sent into the surgical room to be treated for his other diseases. The Surgeons, finding it necessary to make an examination which would be very painful, determined, after consultation, to administer chloroform which was done on the patient's requesting it. He soon after recovered from the effects of it, and was apparently as well as usual. On the 19th of January it was determined to perform a surgical operation to remove some tumors. The deceased requested that chloroform might be again given him, which was accordingly done, and the operation was then performed. It was soon observed that he became more languid, and in ten minutes from the time he took the chloroform he was dead. On making a *post mortem* examination, it was found that his lungs were congested; his brain presented the appearance of a person dying in full health, and the heart was large, and its ventricles and auricles were empty, and its condition flabby; and about half an ounce of watery fluid was found in the pericardium. The viscera of the abdomen were healthy.

GURDON BUCK, Jr., attending surgeon to the New York Hospital, being sworn, says—That on or about the 26th of December, I advised that chloroform should be administered to the deceased for the purpose of examining the condition of the rectum, the parts being in a state of excessive irritability. The patient recovered from the effects of the chloroform, and remained in all respects in the same condition as before its use. On the 19th of January, the deceased being in a sound condition, except the local ailments spoken of, and he having never complained of either his head or chest, and not having suffered from the first administration of chloroform, I directed it to be administered to him for the purpose of performing an operation upon the rectum, the patient soon became excited by the chloroform, as is usually the case but not beyond a degree which I have often observed. Shortly, after he became more tranquil; the deceased was placed upon his side and the operation performed, which consisted in the removal of two external tumors and tying of one internal tumor. At this moment my attention was arrested by my assistant calling for a wet cloth; on examining the patient, I found his face and neck of a livid leaden hue, or color, the eyes turned upward, the pulse imperceptible at the wrist, and the whole body relaxed; after two or three gasps he ceased to breathe; every means were promptly used to restore the deceased, but without effect. The chloroform was obtained at Bent's, 91 John street, and not exceeding three drachms was admin-

istered from a napkin ; a portion of chloroform from the same phial had been administered the day before to a patient without any unfavorable effects ; about 10 minutes elapsed from the commencement of its administration before death took place ; on making a post mortem examination, twenty four hours after death, I found the face less livid than before death, on examining the head, the brain and its membrane presented no other appearance than are seen in persons dying in full health ; the lungs were a good deal congested, and discharged when cut, a large quantity of bloody serum ; the heart was large, its ventricles and auricles were empty, its condition flabby, the substance of the left ventricle rather softer than natural ; about half an ounce of a watery fluid was found in the pericardium ; the viscera of the abdomen were healthy.

GURDON BUCK, M. D.,  
Surgeon to New York Hospital.

KEARNEY ROGERS, Surgeon to New York Hospital, having duly affirmed, says—That he has often used chloroform prior to the performing of an operation, and has seen it used by others, certainly as often as one hundred times ; I have never seen any ill or fatal effects from its use until the present case ; I believe it a proper agent, and also believe that if five hundred patients were operated upon while under the influence of chloroform, the mortality would not be greater than in the same number of cases where it was not used ; I think the administration of chloroform in this case was proper ; and I would have restored to its use had the patient been under my charge.

KEARNEY ROGERS, M. D.,  
Surgeon to the New York Hospital.

The Jury in rendering their verdict that the deceased came to his death by the administration of chloroform, added that they believed its administration in the case was proper and justifiable.

### IMPRESSIONS IN PLASTER.

The usual method of taking impressions in plaster is doubtless generally known to most of our readers ; but a few further, and perhaps not altogether familiar hints on the subject, may not be unacceptable to those who fail of complete success in this department.

The article of gypsum or plaster of paris, differs essentially in its character ; first, according to the locality from which it is obtained ; and secondly, in the manner in which it is prepared for use.

Pure gypsum is found to consist of lime, 28 ; sulphuric acid, 40 ; water, 18 ; its full equivalent being a fraction over 86. This is the article most commonly in use in our country under the name of plaster of paris ; though our market is mostly supplied from Nova Scotia. Pure gypsum is found, however, in various parts of Europe. The Nova Scotia plaster is obtained by grinding the crystals of gypsum

(selenite) to a powder in a mill, and then heating it in a kettle, up to a little above 300 degrees Fahr., (it will boil before it reaches this temperature,) when its two equivalents of water of crystallization are expelled, and it is fit for use. When mixed with water to the consistence of cream, it absorbs its two equivalents of water, and becomes recrystallized, though in an opaque form. If heated to a temperature over 400 degrees Fahr., the particles become indurated, and it no longer possesses the property of absorbing water. But this article is comparatively soft and brittle, is easily decomposed by heating, and is incapable of withstanding the influence of the weather.

The true plaster of paris, or calcareous gypsum, is of course imported from the vicinity of Paris. It contains about 12 per cent. of carbonate of lime. It is prepared by being *baked* and afterwards ground. When in the form of paste, it is exceedingly plastic, and when consolidated, remarkably hard and tough, owing no doubt to the presence of the carbonic acid contained in the carbonate of lime. It is used in Paris extensively, as an out-of-door building material, where it is exposed with impunity to all of the influences of the weather. It will also withstand a high temperature of heat without being impaired. All of these peculiarities render it infinitely superior to the Nova Scotia plaster for our purpose of taking impressions.

The calcareous gypsum, or Paris plaster, is readily distinguished from the Nova Scotia, in that the latter is of a very clear white color, inclining to blue; it has also a feeling of roughness or grittiness, while the Paris plaster is of a decided yellowish white, and has a soapy feeling when passed through the fingers. Its plasticness when mixed with water, will at once distinguish it from any other kind. We assure our readers that after making a trial of this article for the purpose mentioned, they would have no inclination to use any other. The plaster should always be finely pulverized and sifted, and the mouth wiped dry, previous to taking impressions.

In taking impressions in plaster, it often happens that the mould obtained is entirely perfect, except those parts corresponding with the highest point of the roof of the mouth; this imperfection is occasioned by air being concentrated in that locality, in consequence of the cup-shape formation of the jaw, given to it by the alveolar ridge. This can easily be avoided, and success always rendered certain. Previous to putting the plaster-holder into the mouth, place a small wedge-shaped piece of plaster in a semi-plastic state, in the highest part of the roof of the mouth, its point of course touching first; as you press it up, it will gradually fill at every point around from the centre, without the possibility of there being any air-hole or imperfection thus far. This will generally fill the roof of the mouth down nearly on a level with the bottom of the alveolar ridge. Your holder, charged with comparatively a small quantity of plaster, is now introduced into the mouth; as it is gradually pressed upwards, it readily unites with the plaster already there, and flowing around the anterior surface of the

gums, the union is complete at every quarter. On removing the plaster, you are always gratified to find the impression perfect in every respect.

But it oftentimes, if not generally, occurs, especially if the above directions are followed in full, that great difficulty is experienced in removing the impression from the mouth, in consequence of atmospheric pressure. Sometimes we have been obliged to resort to the severest measures to separate the one from the other. No lifting one side or the other, no pressing backwards or forwards would suffice. And when after a good display of "bone and sinew" we have finally brought it away, tinctured with many a sanguineous stain, we have found a half-way apology for our severity in the comforting exclamation, that it was a "*remarkably* good impression." But this is no late thing with us ; we date it back to the *dark ages* of our practice ; to our credit be it spoken, we soon discovered a remedy for this, which has ever since proven as infallible as it is satisfactory.

In all of our holders for upper sets, we have a small hole punctured in them, about one line in diameter, at a point corresponding to the centre of the palatine arch. Just before filling one of these with plaster, we close up this orifice with a thin piece of sheet wax. Immediately on the plaster being pressed to its place in the mouth, we take a small piece of wire, and with it penetrating the wax, we pass it upward through the plaster, until it reaches the roof of the mouth ; it is thus suffered to remain until the plaster is nearly or quite hard, when it is withdrawn. By this means, an air passage is formed to the centre of the impression, where the vacuum is always most complete, and the holder may be removed without the least difficulty.

The crystallizing or hardening process of the plaster is wonderfully facilitated by using pure rain water, into which a small quantity of common salt or alum has been dissolved. While the use of hard water simply, retards its setting, dissolving gum arabic or glue in this last, will protract its setting to a very remarkable extent.

We should avoid leaving our plaster in a damp place, or it may absorb moisture and soon become unfit for use ; this can be dispelled however by heating it over again. Even plaster that has once been cast into forms, when pulverized and baked anew, is fit for use again.

The imperfections occasioned by air-holes, in casting the plaster into moulds for the purpose of obtaining models, may be easily obviated by first placing a small quantity of thin batter into them, (we generally use a finer sort for this,) and then *blowing* down upon it a small current of air from the mouth, until we have displaced it, so that the surface of the mould, immediately under this stream of air, is nearly or quite discernible. We trace this little circlet, made by the force of the air from the mouth, displacing as we go, all over the surface of the mould. By this means, you drive every hidden bubble from its retreat, and at the same time force the plaster into the most

delicate depressions of the mould. You then fill up the casting to the desired height, and on separating the model from the mould, you cannot but be delighted with the delicate perfection of your work.

This method of blowing upon the plaster when in the form of a thin paste, is practiced by sculptors and our best artists in plaster; by which means they obtain perfect impressions of the most delicate and elaborate works of art.

The charming medallions and relievos in plaster, which occasionally come to our eyes, with their lines as sharp and delicate and an exquisiteness of finish, as though they had come direct from the hand of the original artist, and were indeed archtypes themselves, were cast in this manner, for such perfection can be gained in no other way *American Journal*.

### A NEW CHAIR ADAPTED TO THE PRACTICE OF DENTAL SURGERY.

We have lately examined a chair, to be used in the practice of dental surgery, which has been invented by Mr. Gilbert, a surgeon, of Suffolk-place, Pall Mall, and which we consider presents very ingenious and useful peculiarities. Its chief feature is, that it removes the fulcrum required in the extraction of teeth *out of the mouth*, so that the jaw is not liable to sustain injury. It consists of a padded and easy seat, with arms; a moveable back, which can be readily let down to any inclination, and which (the back) at its summit is semi-circular, so as to receive and retain steadily the head of the patient. At the right-hand side is let in a strong circular steel bar; on this runs another at right angles, which can be promptly fixed by a screw at any required height. The cross bar, at its termination, holds a flat piece of metal, which being covered by lint, is brought opposite to, or within the mouth, and serves as the fulcrum for the forceps used by the operator to rest on. In extracting the teeth of the lower jaw, the forceps are placed *superiorly* to this fulcrum. In the removal of teeth from the upper alveoli it is only necessary to let down the back of the chair, when the operator, standing behind the patient, makes the *inferior* surface of the bar his fulcrum, and proceeds to extraction in exactly the same manner as in the former case. The forceps having grasped the tooth, the operator, with a single movement *in one direction*, raises the latter out of its socket.

Mr. Gilbert states, "that he was led to the construction of his invention, which he has now fully matured, by a remark of John Hunter, to the end that the extraction of a tooth should, 'if possible,' be effected perpendicularly, or *in the direction of its axis*. (See 'Natural History of the Teeth,' p. 122.) Every surgeon and anatomist must needs admit, that the more extensively a *lateral* force is used, the greater is the extent of injury to the alveolar process, to say nothing of the increased pain and hæmorrhage consequent upon the crashing of the jaw and the structures by which it is surrounded, which

is inevitable unless the fulcrum can be removed from these structures."

Mr. Gilbert (with a certain degree of modesty which is not exhibited by all inventors) forbears to assert that by means of his apparatus, tooth-drawing will be rendered a positively *pleasurable* operation to the patient, but he contends that by its use the suffering is rendered "*quite bearable*." He hopes entirely to banish the "key" from dental surgery, which terrible-looking instrument has long been the great bugbear of the art. He has shown us, very satisfactorily, that with his chair any species of forceps may be used, at the pleasure of the operator: we believe that Cartwright's forceps is that which he commonly employs. *Lancet*.

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### A NEW RACE.

The world is not yet fully discovered, and there are races still unknown. We believe great discoveries are yet to be made between the great ranges of mountains, the Cordilleras, on this continent. Mehemet Ali sent an expedition up the "White Nile," for the purpose of exploring for gold mines supposed to exist there. Mr. Werne, who accompanied it, gives an account of its arrival in the interior of Africa, at the kingdom of Bari, whose capital, called Pelenja, is situated in 4 degrees N. l. which is inhabited by an extraordinary race of people hitherto unknown. The men are tall and powerfully built. They stand *seven to seven and a-half* English feet in height, athletic and well proportioned, and although black, yet have nothing of the usual negro character in features. They cultivate tobacco and different kinds of grain, breed cattle and poultry, and are fond of the chase. They manufacture from the iron in the mountains weapons and other implements. About fifteen hundred of these blacks came down to the shore armed to the teeth; but the frank cordiality and good humored intelligent countenances of these men forbade the idea of any hostile intentions. Mr. Werne says that they were fine subjects for the sculptor or painter. For some reason unexplained, they all extract the four lower incisors, supposed to be a religious distinguishing trait. Who are they?

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A DOUBLE-HEADED CHILD.—There has lately been presented to the Baltimore College of Dental Surgery, a monster in the shape of a white male infant. The two heads and faces are distinct except along their line of junction, which occurs at the forehead, cheek, chin and base of the lower jaw. Each face has a *hare lip* which extends back through the palate, forming a communication between the nose and mouth.

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# NEW YORK DENTAL RECORDER.

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MARCH 1, 1849.

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## DR. MANSON'S TOOTH WASH.

We have been favored with a specimen of the *Vanilla Tooth Wash*, manufactured by T. Manson, dentist. It contains stimulating, astringent, and alkaline properties, and is pleasantly flavored with the extract of the Vanilla Bean. As in most of the tooth washes, tincture of Myrrh predominates. We should think it a useful article for inflamed and spongy gums, but of little use when applied to the teeth. Astringent lotions are often beneficial to the mouth for restoring the gums to health and firmness after extracting irritating fangs or scaling the tartar from the necks of the teeth. These irritating substances produce a peculiar atonic condition of the capillary vessels, in which they lose the power of contraction, become engorged with blood, giving them a swollen and livid appearance, so much like the appearance which they assume in scorbutic affections, that it is frequently denominated "scurvy of the gums." They are seldom found in this diseased state, however, unless from neglect of the tooth brush, or after severe illness in which mercurial and other powerful medicines have been administered; but, when so, are frequently so very tender to the touch that the patient cannot bear the friction of a brush upon them. In this condition stimulating and astringent tinctures are very beneficial. The tincture of myrrh has long been a popular remedy, not only on account of its stimulating and healing qualities, but because it imparts a pleasant aromatic bitter taste to the mouth, and neutralizes for a time any fœtor in the breath. We generally give the following recipe when astringents are indicated:

Tinct. Cinchona,  
" Catechu, aa. ʒj.  
" Myrrh, ʒss.  
Oil Sassafras, q. s. Mix.

At the same time we direct the patient to apply it with a soft worn tooth brush and as soon as possible to use one moderately hard, until the gums will bear severe brushing.

When the mouth is in a healthy condition, the best specifics for preserving it so are the "*scrubbing brush and soap and sand.*" The scrubber should be a well made French tooth brush, with bristles of a medium degree of coarseness, set in a firm, compact manner, and having all the corners of the ivory carefully

rounded, so that the membrane of the mouth may not be wounded by a slip while using. The *soap* should be of the best quality of Castile and well seasoned, and it should be combined with *sand* of different kinds, according to the condition of the teeth. If the enamel be rough on its surface, requiring polishing, finely pulverized pumice should be used, mixed with orris, or any pleasant vegetable powder which will serve to dilute it and prevent it from cutting away the enamel too much; while if the surface of the teeth has that beautiful natural polish which is often seen, or if it has acquired an artificial one, the mildest kind of polishing powder will be all that is required, such as chalk, and, with many persons, the brush and water, thoroughly used, will be all that is necessary to preserve the teeth from the slightest stain.

If all would thoroughly cleanse their mouths in this way, at least once in twenty four hours, there would be but little use for tooth washes, and perfect cleanliness would be found to impart a more delightful freshness to the breath than all the perfumes of the East.

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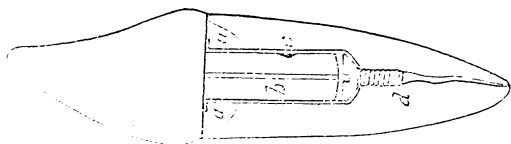
#### F. H. CLARK'S PATENT IMPROVED METHOD OF INSERTING PIVOT TEETH.

This improvement consists of a cylindrical lining, of a size to fit the opening usually made in the root of a tooth for the reception of a wooden pivot. This cylinder has a bottom of a spherical form with a hole in its centre through which a screw passes into the natural canal of the root, which is carefully prepared for its reception by "tapping," &c. The cylinder has likewise a phlange or collar around the other end, to enable the dentist to fill with gold any cavity which may have formed in the root (however large it may be,) if its edge is not obliterated. The inside of this cylinder has, near its bottom, an elevation or bar soldered across, to serve as a catch for an elastic metallic pivot.

The screw which passes through the bottom of the cylinder and holds it in its place, is usually perforated through its length for the purpose of allowing the escape of pus in case of disease of the alveolus or periosteum. The propriety of allowing this matter to escape through the root by means of its natural canal, is an undecided question; the perforated screw, however, will enable the dentist to decide for himself, as he can close and open it at pleasure.

The advantages claimed for this mode of inserting pivot teeth, are as follows: First, the root being lined with gold, and

its end being filled or covered with the same metal, it is protected from further decay. Second, no impure matter finds a permanent lodgment between the root and tooth, as the tooth is made removable at the pleasure of the wearer for the purpose of cleansing. This, it is believed will prevent the offensive odour inseparable from the usual method of inserting teeth by means of the wooden pivot. Third, it is confidently asserted that a root thus protected will last many years longer; and if this is true, an early resort to a gold plate is avoided, and the destruction of the teeth to which it is attached prevented.



The cut represents a tooth and root with the above described apparatus inserted, one side being filed off to exhibit at one view the interior arrangement. Letter *a.* represents the gold filling in the end of the root; *b.* the elastic pivot; *c.* the catch; *d.* the screw which confines the tube within the fang.

### CONTRIBUTIONS FOR THE RECORDER.

The Communication from Henry Villers, one of the oldest practising dentists among us, it is believed is perfectly unique in its way. If it should fail to clear away from the mental vision of our readers, all the doubt and mystery which surrounds this "seemingly knotty subject," leaving it to their minds as it now is to that of the writer, "as clear as noon-day," it may serve to amuse for a few moments, and show to what different conclusions different minds may arrive, when they resort to hypothesis to explain phenomena in nature which can only be learned by patient investigation, directed by sound judgment and great scientific attainments.

The views of the writer upon the durability of the different kinds of ivory, when used for constructing the bases for artificial teeth, correspond with those which were advanced to us, long since, by an experienced ivory turner and dealer in all kinds of ivory. As to the greater durability of wood pivots, grown in the manner described, we have no knowledge. That portion of the tree which is buried would soon partake of the character of the root, and if this be tougher or more durable than the timber from the body, the same result would be arrived at by taking the wood from the root of any hickory tree.

## SPENCER'S DENTAL DRILL.

Much mechanical ingenuity has been expended in attempts to construct dental drills for opening cavities on the posterior, grinding and lateral surfaces of molar teeth, which would supersede the slow and tedious process of cutting away the enamel with the common cutting instruments and excavators. Dr. Harris, in his *Principles and Practice of Dental Surgery*, has given wood cuts illustrating three of these drills. All of them look well on paper, and are fine specimens of ingenuity. There are objections, however, against almost all of these instruments which we have seen. Most of them require the use of both hands to put them in operation. Dr. Maynard's, however, is an exception, the instrument being held in the hollow of the hand while the drill is caused to rotate by depressing a small lever with the thumb or fore finger. In almost all operations of this kind upon the back teeth, the dentist should have his left hand at liberty to steady the head of the patient and draw away the cheek so as to admit the light freely to the tooth. Another objection to instruments of this kind is, that the great accession of power and speed which is obtained, increases the pain to the patient. The common burr drill, when used in the most careful manner, and rotated slowly between the thumb and finger, is the instrument most dreaded by the patient on account of the pain which it necessarily inflicts upon sensitive nerves in tender teeth. If mechanical drills are used as lightly and slowly as we *should* use the simple burr drill, in tender teeth, then nothing is gained by their use except their convenience of adaptation to out of the way cavities, such as are situated on the posterior or lateral surfaces of the teeth far back in the mouth. When between the teeth mechanical drills are not applicable for want of room, these cutting instruments, bent in the proper direction must be used. On account of these objections, drills of this kind have not been much used by dentists. In a few cases, however, on the grinding and buccal surfaces of teeth insensible to pain, they will be found very useful.

We have examined Dr. Spencer's drill and consider it as good as any mechanical drill, made for opening cavities in the teeth, which we have ever seen. The parts of which it is constructed are strong and little likely to wear or give way by any power which can be put upon them. The drill stands at a right angle with the shaft of the instrument, and is caused to rotate by means of an endless chain which passes around a small cog wheel, into which the drill is placed, and a pulley at the other end of the shaft, near the handle. On one side of the chain is attached a small piston rod, which moves easily and freely,

causing the chain to rotate backwards and forwards over the small cog wheel. The movements of the instrument are enclosed in a steel case which may be made of any desirable length or form, to please the taste of operators.

A FAMILIAR TREATISE ON DENTITION, Embracing the Structure, Formation and Diseases of the Teeth, with Remarks upon their Preservation, by *Edward Ing*, Dentist.

This is another of those popular works which are so frequently met with upon the structure, formation, diseases, and preservation of the human teeth. It contains much useful information, written in a clear and familiar style, evidently for that great class, *the unlearned*. The remarks upon the developement, irregularity and diseases of the teeth, as well as upon filling and the construction of artificial substitutes, are in the main sensible and judicious; and although written, as the author informs his readers, "at the request and repeated solicitations of his numerous patrons," and apparently for gratuitous circulation among them, cannot fail, if attentively perused, to awaken attention to the importance of early and constant attention to the teeth.

Works of this kind, although they serve to bring the writer's name before the public, and recommend him as a practising dentist, (and this is probably their principal object) do not wholly redound to his benefit; for although he may, as in the present instance, recommend his own "*Indestructible Filling*" and "*Aromatic Tincture*" as "decidedly superior to any now in use," his readers will not all be so credulous as not to believe that the fillings of other dentists are quite as "indestructible," and their tinctures as "aromatic" as those of Dr. Ing. Several years since, Dr. L. S. Parmly, who had then but recently returned from Europe, delivered a course of Lectures in New York upon the Natural History and Management of the Teeth, &c. &c., and although he took especial pains to impress upon his audience that his own peculiar methods of operating were superior to any other, and placed the terms of instruction so high (\$700.) that but few could avail themselves of it, yet we find that the dental art experienced at that time a great revival; new and constantly increasing demands were made by the public for operations upon their teeth, and dentists sprung up on every side. All found employment, although many were too destitute of skill to be trusted with the filing or setting of the teeth in a common handsaw. All familiar treatises, therefore, which are intended to increase and spread a knowledge of the principles of the dental art, and recommend it to the favorable consideration of the public should be encouraged, as they cannot fail to benefit both their readers and the dental profession.

## OBITUARY.

Died at Brockville, on Friday morning, Jan. 5th, Dr. Samuel S. Blodgett, dentist, of the firm of Ambler & Blodgett, of Ogdensburg, N. Y., in the 26th year of his age.

On the Saturday previous to his death, Dr. B., went to Brockville on professional business. The exposure during a cold day's travel probably induced the attack which soon produced a severe biliary derangement terminating in congestion of the brain. Dr. Blodgett has long been known to us as an honorable and upright man as well as a skillful dentist. We copy the following from a late Ogdensburg paper.

Thus has passed away, in the very morn of life, one who, by his uprightness of character, by his amiable disposition and many social virtues, had secured a share of public esteem such as is rarely obtained. In this respect he may perhaps be said to have attained a high position; and he may also be said to have left a bright example for the young man, who is left by circumstances to be the architect of his own fortune. By his integrity and untiring industry, the deceased had won a distinguished name in his profession, and was steadily advancing to the front rank. He was ardently devoted to his professional duties; and in this ardor could be traced the germ of an honorable ambition, which was returning to him daily its appropriate rewards.

Appropriate resolutions were passed by the Ogdensburg Lodge, I. O. of O. F. of which Dr. Blodgett was a member, sympathizing with the friends of the deceased: also to attend the funeral and wear the usual badge of mourning.

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TO SUBSCRIBERS.

Although the terms upon which the Dental Recorder is published, are Two Dollars a year *payable in advance*, we have refrained from calling upon our Subscribers until the present volume is half issued. They must be aware that a work of this kind requires a constant expenditure which cannot be met without their assistance. As the proprietor has now given credit to his subscribers for half the year, it is but fair that they should in turn show him the same favor during the remaining half. They will therefore confer a favor by remitting the amount of subscription, either to the editor, at No. 28 Warren street, or to Messrs. Jones, White, & Co., No. 263 Broadway.

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The attention of readers is requested to the advertisement of an "Office to Rent" on the second page of our advertising sheet.

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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APRIL 1, 1849.

No. 7.

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## AMALGAM FILLING.

[Communicated for the Recorder.]

There are now many good dentists, well skilled in the use of foils for filling teeth, who rely mainly upon gold to arrest the progress of caries, but who, nevertheless, contend that in certain cases of disease of the teeth they can do better service to their patients by using amalgam than with any other material. For this reason they contend that it is their duty to use it in these cases, notwithstanding such a course of practice subjects them to the condemnation of others equally skillful, and perhaps equally conscientious. By conversing with some of those dentists who contend for its use, I have found that there is a difference of opinion, even among them, as to what class of cavities and what quality of teeth amalgam filling is best adapted. While some contend that it should never be used except in a mere shell of a tooth, one that will sustain nothing else, or, in the language of Professor Tomes, "where the cavity of a tooth is so large that the walls are too thin to bear the pressure necessary to the insertion of a gold or tin plug," others think it never should be used in such teeth, but that it is best adapted to teeth having live and healthy nerves and that it should never be put in a tooth after the nerve has been destroyed—that those teeth which have large but superficial cavities, or where the walls around the cavity are broken away, so that it becomes difficult to get a sufficient hold to insure the permanence of gold, are the ones in which its superiority over all other kinds of filling is best tested. It is important, then, if the use of amalgam is ever admissible, to know in what cases it is the most advantageous.

When this article was first introduced into practice in this country by those arrant quacks and knaves, the Craucours, and for several years after they were expelled from the country, amalgam was very generally used, by the poorest operators, for filling all those teeth in the mouths of timid patients, which had been condemned by more skillful dentists. Fearing to have them extracted, and hearing that others had had teeth, in a similar condition, rendered good and serviceable for years, and seeing these assertions backed and endorsed by

eminent clergymen and physicians, they were induced to try the operation, knowing that if that would not save their teeth nothing could. In this way thousands of dead teeth were filled with but little if any regard to the proper preparation of the cavity before inserting the paste. It was put in without removing the decomposed bone, and often over the remains of food contained in the large and hollow teeth. Sometimes inflammation immediately supervened, making the extraction of the tooth imperative; but in most cases they would be tolerably comfortable for a few weeks or months, when they gradually loosened, ulcerated, or became so irritable that it was necessary to have them extracted. These facts are known to every dentist who has been in practice for the last ten or fifteen years, and it is believed will sufficiently account for the assertion of Dr. Flagg of Boston, who says, "I have found it necessary to extract more adult teeth, in the course of the last two or three years, on account of the mischievous effects of *mineral paste*, than for any one other cause, sufficient time having elapsed, since its last introduction here, to show, not the immediate bad consequences, but very many of the remote." Probably every one of these teeth, which Dr. Flagg was called to extract, had lost its nerve, or had it exposed, when the amalgam was put in. Under these circumstances, probably, the effect would have been the same, if, instead of amalgam, either gold or tin had been used.

Every person at all acquainted with the principles of pathology knows that a dead or foreign substance, surrounded by living tissues, is liable sooner or later, from a slight exciting cause, such as cold or a blow upon the part, to produce inflammation, often terminating in ulceration, which continues until the foreign substance is completely cast off and expelled from the system. Thus, musket balls, with the fragments of clothing which they force into the flesh, sometimes remain for many years embedded in the cellular or muscular tissues, until some exciting cause lights up an inflammation and ulceration which at length expels them. This is a wise provision of nature, and is no doubt the cause of the fistulous ulceration which occurs about the fangs of teeth that have long been deprived of nerves. The fangs receive but a slight degree of vitality from the investing periosteum, which gradually becomes less until the irritation about them produces a chronic inflammation that gradually loosens and finally expels them. In the teeth this inflammation may be excited by various causes besides the ones specified above, such as the forcing of particles of food through the foramen at their extremities, or the formation of gas which, if the cavities be filled, has no other outlet but through the fangs, alveoli and gums; but, often when the whole extent of the canal in the fang or fangs, is thoroughly filled with gold, (probably the best method of treatment which can be adopted) inflammation will still attack them causing pain of various degrees of intensity, or a disagreeable itching sensation, that continues as long as they remain in their sockets. Now if these teeth be filled with gold, or tin, or

even with "*Hill's Stopping*," it is all very well and is set down as a natural consequence of the condition of the teeth; but if, unfortunately, they happen to have amalgam fillings, and in an inflamed state come under the observation of a class of dentists who, unfortunately, possess too great an influence over the credulity of the public, the cry of poison or salivation is immediately raised, and not only the practice but the motives of the persons who filled them are at once condemned and censured. They are accused of ignorance, cupidity, and a reckless trifling with the health and lives of their patients. On this account, many young practitioners, who are unwilling to hazard their reputation, refrain from using it, although convinced of its harmlessness and utility, while others, who do use it, say but little about it, hoping thereby to avoid the reproach of being called "amalgam dentists." If they confine the use of amalgam to teeth where there are live and healthy nerves which have not been reached by caries, they need not fear these censures, for their patients, experiencing no inconvenience from it, will be less disposed to credit the hard things which are said about it, and will be contented to let well enough alone.

Dead teeth are also stained much darker and deeper into their structure by amalgam fillings than living ones. Often the whole crown and fangs, after a few months, become of a dark bluish hue, which make them very unsightly objects to their possessors, even when concealed by their position in the back part of the mouth from the view of others. Some have been induced, on this account, to have the fillings removed and gold substituted in its stead, the bright yellow color of which, showing through the enamel, will often restore the tooth to near its original hue. On this account I consider that gold should always be preferred for filling dead teeth, and have discontinued the use of amalgam except in a few extreme cases, where the teeth are all important for mastication, are situated far back in the mouth, and where the parieties of the cavity are so broken away that gold cannot be retained. Where the tooth has a healthy nerve, if the caries is thoroughly removed, and the amalgam made of pure silver and mercury, hardly any discoloration will be produced. The tooth, especially if much decayed, will not possess that bright handsome color which is imparted to it by a gold filling, but will have more the appearance of one filled with tin, on account of the color of the filling showing through the sides of the tooth. The living fluids of healthy dentine do not, however, corrode the amalgam, as does the moisture contained in the dead tooth bone.

Enough has been said of the bad effects of amalgam, in cases of this kind; they are familiar to every dental practitioner. I shall, therefore, proceed to point out those cases which occur in our practice, in which I consider amalgams for filling teeth not only admissible but superior to any material with which we are at present acquainted.

The first class of cases in which amalgam fillings will be found to be more lasting than any other, is where teeth have been worn away by the action of gold clasps placed around them for the purpose of sustaining artificial teeth. These clasps, I believe, always injure the teeth which they embrace, sooner or later. This is owing, in part, to the constant friction which they produce upon the teeth by their continual motion during mastication, aided, probably, by a slight galvanic action, the tendency of which is to decompose the salts which enter into the composition of the teeth. These carious spots are generally extensive, and at first confined to the surface of the teeth, often extending to one half or three fourths of their circumference. The more perfectly the clasp is made to fit, the more extensive is the caries, as it first commences where the clasp is in contact with the tooth. Those dentists who have attempted to fill a tooth with gold, when the caries extended around any great portion of its circumference, will fully appreciate the difficulties which have to be encountered in such cases. In order to secure the permanence of a gold filling, it is desirable that there should be a continuance of the wall of the cavity around its entire circumference, so that the gold may be forced in every direction and have a substantial abutment in the side of the cavity to sustain it; but when the caries has extended around one half of the circumference of the tooth, force can only be applied, in packing the gold, toward the gum and the end of the tooth; these two sides of the cavity must be made to sustain the filling alone. Now although a gold filling may be put into such a cavity so as to arrest caries for many years, perhaps for life, if the clasps are removed, I have yet to see the first one which has lasted for any great length of time subjected to the constant action of a clasp. The same causes which produced the first caries will soon re-produce it and in a year or two the filling will be found defective in many places, and, if an attempt be made to repair it, the chances are that the whole must be removed and the difficulties will be found greater than when the tooth was first filled.

In cases of this kind I have found amalgam far superior to either gold or tin. Its great superiority consists in its forming one solid mass, every part of which coheres firmly together, so that one part cannot give way and come out without the whole. After remaining for a time in the tooth, it should be examined carefully and if caries continue at any point, it may be excavated and the filling repaired by adding more amalgam, which will cohere as firmly to the first as though it had been put in at the same time. It is necessary that the plate should remain out of the mouth twenty-four hours, until the amalgam has become solid by every particle of the mercury combining with the silver, otherwise it will unite with the gold clasp. In this way the teeth may be preserved for many years. I have seen several cases where the whole clasp embraced the amalgam, touching no part of the tooth, that had been worn for several years and showed no signs of farther decay. Who will say that the use of amalgam in such cases, if we

except the slight danger which exists of its producing ptyalism, is not only justifiable but good practice and who, with one or more teeth in this condition, would not run the risk of a slight constitutional effect from the influence of the mercury, rather than submit to the loss of one valuable tooth after another until the whole are gone. When we see the hundreds of cases in which amalgam fillings are used without any specific effect being produced upon the constitution, by the mercury, it certainly appears to me that we are justified in trying it where it possesses a manifest superiority over any other material. If symptoms of ptyalism should appear, the filling can easily be removed or the tooth extracted. There are some persons who have a deadly fear of mercury in every form of combination; for such I should not be willing to use amalgam, for their own imaginations would constantly keep them in fear of salivation and all its attending evils, if they did not actually produce them.

In all cases of superficial caries where it becomes difficult to pack gold or tin foil so that it will be retained, and where there are difficulties in the way of deepening the cavity, such as the proximity to the nerve, exceeding tenderness of the bone &c. &c., amalgam will be found the safest material which can be used. Says Dr. Trenor, an eminent dentist of New-York, "Of its advantages, the most prominent and peculiar one, is the tenacity with which it adheres to the surrounding surface of a cavity into which it is put; in this respect, it is exceedingly remarkable, and far surpasses that of any other material with which we are acquainted. It will, as it were, fasten to a surface, harden and adhere, when there is so little of a cavity, that neither gold foil, nor tin, nor any thing else can be made to remain at all. There is no filling that can be put in with the same certainty of its remaining, and this too, even when carelessly done." This, I believe, has been the experience of all who have used it in shallow cavities.

Dr. Trenor also recommends amalgam for filling the temporary teeth to prevent suffering and preserve them until they loosen from the advance of the second set. I have seen several cases of this kind where amalgam had been used and in all of them the operation was perfectly successful, the teeth loosening from a gradual absorption of the fangs and falling at the proper time, the same as sound and healthy teeth. In these cases it possesses the great advantage of being put in without that pressure which is required to pack gold and which is oftener painful when exerted on the temporary, than upon the permanent teeth. I have never used amalgam for filling temporary teeth; but have always preferred either gold or tin, on account of the dark color which amalgam is apt to assume in the mouth, where it is not kept clean by brushing. A soft tin filling is also put in with less trouble to the operator, than is required to prepare amalgam and insert it in the cavity; and the pressure required to make it sufficiently durable to preserve temporary teeth, as long as they are ever retained after beginning to decay, is not such as either to give more pain to the little patient or in-

flict any injury upon the new tooth forming beneath it. I have no doubt, however, but in many cases it would be found serviceable, especially in very large cavities where the walls are broken away so that it would be difficult to make a permanent filling of foil.

Next to those cases where caries has been produced by clasps, there are none in which amalgam will be found so much superior to either gold or tin, as where the sides of cavities are badly broken away and when it is desirable to make the surface of the plug as large as possible for the purpose of mastication. Cases frequently occur where there is only one remaining grinder which, from this fact, has become invaluable to its possessor. Owing to the plastic and cohesive properties of the amalgam, it may be moulded to take the impression and perfectly fill the most irregular cavities, and the sides may be so perfectly built up, without danger of its crumbling away afterwards, as to restore the original form and use to the tooth after the walls are more than half broken away to the very bottom of the cavity. The amalgam, when well mixed, after a few days becomes harder than solid gold and, as it coheres in one mass, it is only necessary to have two opposite or nearly opposite points, slightly dove-tailing, to hold it in its position. I have seen many cases of this kind, where for all purposes of mastication the teeth, which had been used from three to six years, were as good as perfectly sound ones. It needs no comment to show its superiority over gold in cases of this kind.

There is another class of cavities where it is next to impossible effectually to arrest the progress of caries, in which amalgam fillings have been found very serviceable. I allude to decay in the wisdom teeth, when it attacks them on the outer and posterior sides. Here we often find the enamel soft and chalky around the cavities and extending to a considerable distance from them. If a cavity in this condition be filled, either with gold or tin, we soon find that the disease has spread around the filling and is gradually undermining it. In this condition it must be renewed, the cavity enlarged and re-filled and generally with the same want of success as before. If the softened enamel be scraped away and the bone of the tooth carefully polished, the operation may be more successful; but owing to the difficulty which there is in thoroughly cleaning this part of the tooth with the brush, especially in small mouths, we generally find them soon covered with a nauseous putrid deposit which re-produces the caries on the polished surface of the tooth. It matters not whether they can be kept clean and thereby protected from farther decay, or not; it is the duty of the dental surgeon to use his best endeavours to preserve defective teeth for the unclean as well as for the cleanly. He is not to enquire whether the patient has done *his* duty but proceed directly to his own, which is to use his best endeavours to arrest the farther progress of the disease, giving at the same time all proper directions for the future preservation of the teeth.

I have frequently seen teeth of the above description—which had been several times filled and re-filled with gold and tin, by men who deservedly rank among the very best operators, and each time unsuccessfully, until finally they had so far crumbled away, from the constant progress of disease, that these very men had condemned and recommended their removal from the mouth—so effectually stopped with amalgam that they remained useful members of the dental family, for a much longer period than had elapsed from the commencement of the disease up to the time when they had been condemned, and which were still as good and sound as when the amalgam was first put in. In cases of this kind, where the cavities extend around the outer and posterior corner of the tooth, the amalgam can be moulded to the exact form of the tooth and perfectly fill every crevice in the opening: while if gold be used, great difficulty will be experienced in getting at the cavity and keeping it dry while the gold is being introduced and often these difficulties cannot be overcome. Even after the tooth is filled, it will be impossible for the dentist himself to say whether it is well filled or not, for a great part of the cavity, being hidden from view a small spot may be left where the filling is not well packed and here the moisture penetrates; caries commences and all his labor, (and with it the tooth), is completely lost. This is generally the fate of fillings of this kind and is now so well known that very few attempt to save such teeth, when badly decayed, except with amalgam.

I have thus attempted to describe some cases which occur in the practice of the dental surgeon, in which I consider amalgam not only admissible but the very best article which can be used. There are some others which will occur in practice, but the above three classes of cases are the principal ones in which I consider it my duty, as an honest, conscientious man, pledged to do the best in my power for my patients, to recommend amalgam fillings, as the very best practice with which I am acquainted, for the preservation of their teeth.

C. .

*To be continued.*

## REPORT ON PRACTICAL DENTISTRY:

*Under the adoption of Resolutions at the Eighth Annual Meeting of the American Society of Dental Surgeons, held at Saratoga Springs, August 3d, 1847. By C. O. Cone, D. D. S. of Baltimore.*

Dr. Cone in the report before us has evinced a thorough theoretical and practical knowledge of the science of Dental Surgery, and has given a detailed description of most, if not all, the important improvements which have been made in its practice within the last few years, with the elucidation of those important scientific facts and principles

upon which all real improvement must be based. We would recommend to all our readers its attentive perusal, as much useful information may be derived from it, especially that portion which is devoted to practical subjects. We regret to see, in this report, a want of care in its composition which greatly mars the whole production. There is hardly a page which does not contain errors of which the following are examples. "I would offer it as an opinion, that full two-thirds of the failures in the operation of plugging, is dependent," &c. Again: "Such a course of practice by members of the profession, who practice the duties of this branch of the healing art only mechanically—not resting its demands and its permanent success on deductions drawn from physiological and pathological developements and indications—can occupy a position in relation to his patients, is only equalled" &c. Such errors as the above occurring so frequently, together with occasional attempts at a highly florid and figurative style, out of place in compositions of this kind, detract much from the pleasure of perusing this otherwise highly interesting report.

† Much of this report is taken up with a review of the proceedings of the American Society of Dental Surgeons since the time of its formation, and a labored attempt is made to justify the course which the Society took in reference to the use of amalgams for filling teeth. As our readers are already acquainted with our views upon this subject, and as a correspondent in our last number has discussed this portion of Dr. Cone's report, we shall have nothing more to say upon it at this time, but present some of the views of the reporter upon subjects of a more practical character. After a description of the various steps in the operation of plugging a decayed tooth, in which the writer urges the greatest care in every part, we find the following views upon the susceptibility of the tooth to new attacks of caries.

"Without an observance of the above general features of *care*, no operation in plugging can be relied on, with any degree of certainty in relation to its permanent influence. From facts known, I would offer it as an opinion, that full two thirds of the failures in the operation of plugging, are dependent on the unfaithful manner in which operators prepare the decayed cavity—leaving some part of the surrounding dental structure, that is to support the plug at its side or floor, either disorganized, or deprived of its vitality by destruction of its animal tissue, and suspension of its circulation, thus easily subject to the action of chemical agents, or the improper condensation of the material, not rendering it impermeable and compact as the ossific dental tissue.

“But the report would desire not to be misunderstood as saying that operations, when completed agreeably to the above urged cautions, will always be rendered permanent and useful, during the future life of the patient. The operations must necessarily be subject to many uncertainties, as all operations connected with living tissues—the operations of which must be subject and dependent on the changes of the organized whole. Many members of the profession, forgetting this and relying on the perfection and completeness of the manual execution of the operation, or a want of scientific observation, assure their patients, in the strongest language, of the permanency of a plug in a decayed tooth, which from the very nature of the case, could not be productive of any thing more than temporary benefit, not from a want of completeness in the performance of the operation, but the state of the organ, from disease or formative organization, and unhealthy dependence on an enervated system.

“Such a course of practice by members of the profession, who practice the duties of this branch of the healing art only mechanically—not resting its demands, and its permanent success on deductions drawn from physiological and pathological developments, and indications—can occupy a position in relation to his patients, is only equalled by the physician, (but more ruinous to the profession,) who renders his professional practice subservient to *nosology* without *diagnosis*, and prescription without indication.

“A dental operator who introduces plugs into the teeth of a young and anemic patient, possessing a mucous temperament, and a predisposition to inflammatory action; the mineral ingredients of the dental tissues, small in quantity, and poor in quality, as shown by the complexion of the organs, character of their decay, and the firmness and density of their tissue, and assures his patients of the permanency of such operations, from a consciousness of the mechanical perfection of such operations, and a want of physiological and pathological comparison of the parts, on which all his operations rest, does as much to destroy the effort to elevate the profession, as any class of men. And this almost total neglect of logical analysis, and a tendency, when generalization is at all consulted, to speculate in fanciful analogies, and purely mechanical solutions, rather than to extract truth from facts, may be enumerated as one of the most serious defects of dental practice, and the present system of dental education, as generally patronized.

“This feature of the profession carries with it a fatal influence to a successful study of disease and dental practice, by rendering it, in the estimation of the student and such a practitioner, the success of dental practice the subject of accident; and leads to disgust, and disregard of the honor and honesty of the calling; and if not an abandonment of the profession, its disgrace, and an entire absence of moral confidence in the profession, and its honorable and successful members, which experience imparts to the philosophical dentist.

Again, it injures the profession, by establishing expectations, which are to be disappointed by the experience of the patient, who finds his only relief in the recital of his misfortunes, resulting from what *he feels* to be *malpractice*, and the establishment of a want of confidence, and an absolute distrust in the community, in relation to the protective and remedial influence of dental practice over diseases of the teeth. It also exerts a most powerful influence in destroying harmony in the profession, and a disregard of professional ethics—a fact which is too apparent to demand illustration.

“It is hoped by your report, that an attempt may be made to supply the deficiency thus briefly disclosed, in the education and practice of the profession; and trust that it will not be thought untimely for the report to urge the association, to adopt some measure that shall have in design the cultivation of proper and correct information and reasoning, upon this particular department of the profession, not only with the fellows of this Society, but the profession generally.

“Dental surgery can only be faithfully, and even honestly dispensed, with a high practical excellence in its mechanical manipulations, guided and resting upon a knowledge of the development and functions of the human economy, during both health and disease. If unacquainted with the tissues, compositions and relations of the organs of the body, how is a practitioner to understand their function? how compare the healthy with the morbid structure? how explain the physiological workings of the system? how study correctly the pathology of disease, without a previous knowledge of physiology? Without a knowledge of pathology, how determine the diagnostic symptoms and the prognosis of disease. Deficiency in any of these branches, renders the practice of dental surgery downright empiricism; but with such knowledge we may pass from the known to the unknown, and by the education of observation, are enabled to determine not only the remedial indications of our art, but determine the progress of the disease, and the tendency of its end, in spite of remedial efforts to stay its progress, and enable us to anticipate results, and by our advice be the agent, in causing the patient to institute *hygienic* measures, which defer the day of evil, and contribute to the comfort of the sufferer, and tend to the success of the efforts of the operator.

“The report would retain the attention of the Society for a moment, with the question of how great a number of plugs may be introduced in the crown of a tooth, without contributing to the susceptibility of the organ to the attacks of dental caries? In answer to this question, Koecker, in his Dental Surgery, observes: “Not unfrequently, from ten to twenty teeth may be preserved by this operation in the same individual;” but that a much greater number of teeth are often plugged, and preserved through life, than that named in the quotation, is familiar to every observing dentist; but then to what extent it renders these organs susceptible to decay, is not so

satisfactorily ascertained; but that the dental organs are so influenced, cannot be doubted. The whole process which constitutes the operation of plugging a tooth, is such as tends to institute inflammatory action. If the inflammation is only slight, and resolution is followed, by the original structure of the parts having undergone no change, then the operation, (if its mechanical execution has been complete,) does not increase the susceptibility of the teeth to the attacks of dental caries; but if the inflammation assumes an ossific character, as is more frequently the result of an operation for the removal of dental caries embracing a large portion of the tooth, with patients in whose constitution the sanguineous predominates, and whose age places them near or past the meridian of life; the dental tissue loses its usual whiteness, and assumes a peculiar yellowish tint, which is often very perceptible in a tooth that has been the subject of the operation of plugging at a number of points of location on its crown; and in proximity with organs that have not been the subject of dental disease and operations, and in the mouth of the same patient, which invites comparison. Teeth subjected to such a condition, from the influences of the causes named, become also more brittle and friable. These changes are produced by certain alterations which take place in the anatomical constituents of the teeth, by the increased density of the organs, and the obliteration of many of their vessels followed by a diminished circulation in the same.\* At this point of the argument the query arises, if the increased density of the organ would not also increase its power in resisting the attacks of dental caries? To this your report would answer, that if the increase of density of the tooth resulted from a deposit of the phosphate of lime, the query would assume a more forcible position: but arguing from analogy and experiment, the new deposit consists merely of the carbonate of lime. But even admitting the increased ability of the more compact dental tissue to withstand the attacks of corrosive agents, when considered independently, is more than counterbalanced, when considered in connection with the loss of vitality and vessels of nutrition in the dental tissue, as its density is increased. Life or vitality is in opposition to decomposition, and there is a continual struggle between the two for the dominion over matter and just so far as an organ is deprived of its vitality and nutritive function, it is rendered an easy prey to the decomposing action of chemical agents.† An illustration of this truth is seen in the resistance which the fangs of the teeth offer to dental caries, over that of the crowns of the teeth, from their superior endowment of vitality or organization.‡

If the patient be young, and the relative proportion of earthy matter of the dental tissue be small, the inflammation is more liable to result in the destruction of the vessels of the dentine, immediately in the vi-

\* Gross' *Pathological Anatomy*, Boston Ed. of 1839, vol. ii, p. 178.

† Muller's *Physiology*, vol. i, p. 86.

‡ Tomes' *Lectures*, *American Journal of Dental Science*, vol. viii, p. 210.

cinity of the source of inflammation, and the consequent loss of its circulation, without a deposition of calcareous ingredients, which adds to the density of the organ; hence, the effect is such as to render the parts much more easily acted on by corrosive agents, than when the ossific inflammation is the result of plugging. In patients where the effect of the operation of plugging, is attended with results like those just named, and the operation be multiplied on the crown of any one organ, the tooth will not only be rendered friable, and the perpendicular edges of the cavity will easily crumble and detach itself by slight violence from the surrounding structure; but the complexion of the organ will change from a polished pearly appearance, or translucent opacity, to a dull azure or a muddy opaque appearance, and frequently variegated, with light brown spots; and the enamel exhibits an irregular abraded appearance, more or less, according to the extent of destruction of its vitality, and the action of corrosive agents on the decomposition of its surface.

“With these facts, it is rendered certain, that a tooth having the operation of plugging performed for the arrest of dental caries in its structure, is rendered more vulnerable to the attacks of decomposing agents, than an organ uninfluenced by caries; although the original disease may have been completely removed by the operation which instituted a structural change in the organ, the extent of which is governed by the multiplied frequency of the operation on the same organ, and the age and health of the patient, together with the organization of the tooth operated on. To the observing and reflecting dentist, such facts are made valuable, not only in themselves, but in determining the progress of dental disease, and in deciding the character and end of operations, as well as affording valuable hints to the operator in deciding and insisting on the use of proper hygeinic measures by the patient, in rendering the dentist’s services valuable to the fullest extent.”

On the operation for complicated caries, where the pulp of the tooth is exposed, the writer reviews several of the different methods of operating which have been proposed, such as capping the nerves with a gold plate, and also the destruction of the nerve and plugging to the end of the fang. This latter operation he considers of doubtful success when applied to the molar teeth, for the following reasons. ‘The external periosteum, or *perio dental* membrane of the molar teeth, or multiplied-fanged teeth, are less highly organized, and the nutritive vessels which supply the teeth from this source are fewer in number and smaller in volume, than in teeth having but one fang and occupying the anterior portion of the arch.’ From this fact it is argued that the fangs suffer more, for the want of nutrition, in the molar than in the incisor teeth. We have generally attributed the want of success

with molares, when treated in this way, compared with that attending the incisores when subjected to the same treatment, as owing to the greater surface of fangs exposed and covered by the periosteum; the greater force applied to them, after the operation, in the act of mastication, and the impossibility, perhaps, of filling all the fangs in the back teeth as can be done in the front ones. Notwithstanding all these draw-backs, the success which has attended this operation in our hands, has been much greater than we anticipated when it was commenced, and such as to encourage the continuance of it for the present. The following plan has been adopted and practiced with great success by Prof. Harris :

“ Another method has been proposed for securing an exposed nerve from the irritation of a plug for the preservation of the crown of a tooth, by Prof. C. A. Harris, and practised by him and some others of the profession, with a great deal of success, in the cases chosen for the operation. The operation differs from those named above, by so introducing the gold for forming the plug, in such a manner as shall permit its inferior surface, or that looking towards the exposed surface of the nervous pulp, to form an arch, permitting a cavity to intervene between the metal and the delicate tissue, sufficient to secure the nervous pulp from the irritation of the metallic plug.

“ The process by which the operation is brought to completion, may be described in a few words. The cavity in the crown of a tooth, which, from the depth of its decay, makes it necessary to expose the nervous pulp, is to be prepared in the usual way, by the complete removal of its decayed and decomposed tissue. The cavity should then be enlarged, so that a groove or excavation shall form a “ shoulder ” of dentine, projecting, if practicable, on either side of the exposed nerve, at the floor of the cavity ; for sustaining the plug at the bottom of the same. On the approximal surface of the incisores, this injunction is often compelled to be abridged, in consequence of the frail edges of the cavity ; and the loss of the surface in this direction, should be gained by the additional increase of the cavity at its floor, in the direction of the long axis of the crown of the tooth. The material forming the plug must be laid in the cavity, commencing at its superior extremity, in folds, resting their interior end on the floor of the firm dentine formed by the groove, thus continuing to lay in fold after fold, using great caution that each fold be brought in absolute contact with the preceding fold, and condensing it at the same time by cautious but firm lateral pressure, that its condensation may not demand as much force to be applied from without, after the cavity is filled, as well as a preventive against a change of location of the folds, after their position had been determined on, which would endanger the safety of the irritable tissue. When the folds have filled the cavity, so

far as to bring the next fold of foil, if carried to the bottom of the cavity, upon the edge of the depression that borders on that part of the dentine which surrounds the exposed nervous pulp; the fold is shortened and not carried to the bottom of the cavity, and the next fold is made still a little shorter, thus continuing to shorten the folds a little, until the centre of the diameter of the exposed nerve is attained, when the folds should be gradually increased in length, to correspond with their previous shortening, until they pass the entire surface of the exposed nerve, and then brought in contact with the floor of the cavity, as in the first instance, forming a perfect arch over the nervous pulp exposed, without subjecting it to the irritation and pressure of contact. The folds of the metal should be continued after this, and ended in the usual manner, with the exception of exerting more caution than is demanded in an ordinary plug, for the condensation of the same, as introduced.

"The condensation of the plug from without, should be commenced by gradual pressure being applied on the metal at such points, near the edge of the cavity, where the folds extend to the floor of the cavity, continuing the pressure until the consolidation of this portion is effected, and then proceed to condense, by slightly oblique pressure, applied over that part which corresponds with the arch covering the exposed nervous pulp, until the plug is ready for completion in the usual way. If, on the completion of the operation, pain does not soon succeed, or a numbness of the organ follow, showing contact or pressure of the plug on the nervous pulp, and the indications were favorable for its performance, and the mechanical execution complete, a successful issue may safely be prognosticated.

"The permanent success of the operation, when either of the methods of capping an exposed nerve is adopted, depends upon the extent and character of the inflammation in the nervous pulp, which follows the proposed remedy. If it be not of an ossific character, the report hesitates not in asserting that the operation will fail of its original intent, and that, sooner or later, the destruction of the nervous pulp of the tooth will take place.

"It may be laid down as an established rule, that before attempting to proceed to a successful attempt of this operation, to ascertain that the organ on which it is proposed, should not have been the subject of pain, or the nervous pulp of inflammation, or in any way changed its character or function, without a deposition of ossific ingredients.

"In the young subject, both from the imperfect formation of the cavity for the reception of the dental nervous pulp, and the superior vascularity of the dental pulp, before the whole process of the formation of dentine is complete; together with the high degree of vascularity which attend the soft tissues of the young, even if the mechanical execution be completed agreeably with the prescribed directions; inflammation very frequently succeeds, particularly if there be a predisposition to inflammation, as indicated by physical developments.

If a tooth be plugged over an exposed nerve, under circumstances similar to those just described, and the nervous pulp of the tooth has perhaps been rendered irritable by the progress of the dental caries, or may not have been thus effected; the tooth, after the operation, may not exhibit any symptoms that indicate an unfortunate termination; but if ossific inflammation does not supervene, a partial, and then a general inflammation of the nervous pulp will ensue, from the stimulus, perhaps, of some organic derangement; and an increase in size of the capillary vessels will be developed at the exposed surface of the nerve—the first point of inflammation—which will expand the tissue, until a portion occupies the chamber between the plate or cap and the nerve. In this state, the inflammation is rarely ever visited with resolution, but the irritation is increased by the sharp edges of the bony foramina through which it protrudes into the chamber; and the returning vessels becoming strangulated by the increased volume of this part of the tissue, suppuration follows, and destruction of the vitality of the organ, so far as nutrition is effected through this medium, complete.

“This being the history of most of the cases, where an unfortunate result attends the operation; except in such cases, where the operation is attempted upon an organ, the nervous pulp of which had suffered a partial or total change in a part of its structure, it becomes an important inquiry, in a practical point, under what circumstances is the operation most likely to be attended with success, by the avoidance of the above described history of a failure.

“When the decay has progressed slowly, and irritation has given rise to ossific inflammation, and when the nervous pulp is exposed, it is discovered to be lodged in a narrow fissure, formed by the new ossific deposition on either side, the indications are most favorable for success. This state of the parts is more frequently found after or near the meridian of life, when a tendency to ossific inflammation, or earthy deposit, is instituted in the system.\* The state of health should also be consulted. Although all else indicated a successful issue, if the patient is *anemic*, or of an inflammatory diathesis, the chance of success would be greatly lessened. In like manner, the indications of success would be much increased, if the constitutional health of the patient be good, and the sanguineous predominating in his constitution, and the dental organs dense in structure.

“It often happens that the dental practitioner finds the dental nervous pulp exposed, under circumstances, from its pathological condition, or from its previous destruction. When from urgent demands of the case, he is called upon to institute an effort for the preservation of the crown of the tooth, by plugging the organ to the end of the fang.”

\* Gross' Pathological Anatomy, Boston edition, 1839, vol. i, p. 341.

## SALIVARY CALCULI.

[From the Boston Medical and Surgical Journal.]

In a memoir of 1846, published by M. Stanski, it is stated that observers have been mistaken as to the nature of substances extracted from the salivary passages. Having met once a concretion, the nucleus of which was a tooth, he supposes that the various calculi usually found in the salivary apparatus owe their origin to a similar cause. But with this view M. C. Torget does not agree. This gentleman, in a collection of 39 cases, proves that these calculi may occur without even the trace of tooth or any foreign substance accidentally introduced into the salivary glands. The following case is interesting, as it not only exhibits the truth of M. C. Torget's observations, but it also shows the great liability of erring in our diagnosis of diseases of the salivary glands, since physicians seldom meet with calculi in these organs.

Mr. Horne, aged 42, had been for several years past afflicted with what was supposed by his physicians to be an inflammation of the glands of the neck. The disease was situated near the angle of the inferior maxillary bone, upon the left side. Mr. H. states, that for 12 years he had occasionally been troubled with an enlargement of the neck externally and internally, causing him much pain and inconvenience in deglutition. It generally became inflamed as often as once in 5 or 6 months. At these times, the inflammation was usually severe: there was redness of the skin of the neck over the parotid gland, which seemed to indicate that suppuration would ensue—the tongue was swollen—the saliva ran more freely than ordinary, of an extremely pure appearance; and there was considerable constitutional disturbance. This state of things continued for five or six days, causing no little suffering and distress to the patient. He remarks that the inflammation was accompanied with the most excruciating pain, which more than once determined him to have an incision made into it, but the shortness of its continuance caused him to act otherwise.

During the intermission of these exacerbations, the patient complained of no pain, nor any difficulty from the presence of this calculus, except in yawning, or when he opened his mouth suddenly; and even then only a slight "pricking sensation," as he terms it, "as if something was wrong within the muscles of his neck."

Things remained thus till October, 1848, when one day Mr. H. felt an unusual sensation at the roots of his tongue—a giving way—or, as he expresses it, the substance (the calculus) seemed to jump from its long residence into his mouth, and was easily removed by his wife. It was of a conical shape—and its dimensions are as follows:—1 1-4 inch in length; circumference of the larger end, 1 4-27 inch; that of the smaller end, 3-8 of an inch. Its weight is 20 grains.

There is no trace of a tooth in the substance. Mr. H.'s teeth are sound, and his general health has always been good, with the exception of occasional attacks of rheumatism prior to 1836.

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# NEW YORK DENTAL RECORDER.

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APRIL 1, 1849.

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## CONGRESSIONAL REPORT ON ETHERIZATION.

We are indebted to the Hon. D. P. King, member of Congress, for a copy of the Report of the Select Committee to whom was referred the Memorial of W. T. G. Morton, claiming to be the *discoverer* of a method of rendering patients insensible to pain, during surgical operations, and asking Congress to reward him for the same.

Dr. Edwards, Chairman of the Committee, has dissected the mass of conflicting statements and testimony in favor of the claims of both Jackson and Morton, with much skill and industry, and (considering that Morton appears to have been constantly at his elbow, ready to help him out with explanations, memoranda, &c.,) with great impartiality and fairness.

The claim of Dr. Jackson to this discovery appears, by this report, to have as little foundation as that set up by the same individual, a few years since, to the invention of the magnetic telegraph.

From testimony submitted to the Committee, it does not appear that Dr. Jackson ever performed a single experiment with ether, or any other anæsthetic agent, for the purpose of allaying sensation during a dental or surgical operation; but it shows conclusively that he was not even present at the first, second or third operation in which ether was administered, with perfect success. In the early stage of the discovery Dr. Jackson disclaims having any faith in it—he denies to one of his neighbors (Mr. Caleb Eddy), that a state of insensibility can be induced so that the flesh can be cut without pain; says, Morton “is a reckless man for using it as he has; the chance is he will kill somebody yet,” and furthermore declares “that he does not care what Morton does with it, or how much he advertises, if his own name is not drawn in with it.” What consummate impudence does he show, when in the face of these facts, he afterwards declares that, in the first successful painless operation in which ether was administered, performed by Dr. Morton, at his own rooms, and in the subsequent operations at the Massachusetts’ General Hospital, where the ether was also administered by Morton, he (Morton) was only acting as his agent, that he was the experimenter as well as the discoverer, and that all responsibility rested upon him. From this assertion it would

appear that Dr. Jackson had employed Dr. Morton to bring out for him one of the most important discoveries of the nineteenth century, while he quietly remained in his laboratory. Two young men, students of Dr. Jackson, testified that Morton was so ignorant of the nature of sulphuric ether, on the same day (Sept. 30, 1846,) that this important trust was delegated by Dr. Jackson to this "reckless man," that, as one asserts, he inquired what it was and wished to know if it was gas. No sane person can be made to believe that Dr. Jackson had, at this time, any idea of the importance of the discovery that was about to be brought out by Dr. Morton, for if he had had he would have chosen to manage it himself and not have trusted it in the hands of a man who was entirely ignorant of the nature and effects of the agent to be used. After the discovery had been verified by the experiments of Dr. Morton, who had been successful in making the busy world pause for one moment and recognize the discovery, it was easy for Dr. Jackson to see how little Morton had done and how mighty were the results. The chagrin and mortification which he naturally felt at seeing another bear off the trophy which had already been within his reach, first tempted him to ridicule and disparage the importance of the discovery, but when he found that the world continued to look at it and were disposed to honor the discoverer, he then turns round, admits its importance, and claims the honor himself. The Committee concur in the views taken of this subject by the trustees of the Massachusetts' General Hospital, at their Annual Meeting, in January, 1848. They are as follows :

"1st. Dr. Jackson does not appear at any time to have made any discovery, in regard to ether, which was not in print in Great Britain some years before. 2d. Dr. Morton, in 1846, discovered the facts, before unknown, that ether would prevent the pain of surgical operations, and that it might be given in sufficient quantity to effect this purpose without danger to life. He first established these facts by numerous operations on teeth, and afterwards induced the surgeons of the hospital to demonstrate its general applicability and importance in capital operations. 3d. Dr. Jackson appears to have had the belief that a power in ether to prevent pain in dental operations would be discovered. He advised various persons to attempt the discovery ; but neither they nor he took any measures to that end ; and the world remained in entire ignorance of both the power and safety of ether, until Dr. Morton made his experiments. 4th. The whole agency of Dr. Jackson in the matter appears to consist only in his having made certain suggestions, which led or aided Dr. Morton to make the discovery, a discovery which had for some time been the object of his labors and researches."

The Committee in awarding the credit of the discovery to Dr. Morton, state the following :

*"The great thought was of producing insensibility to pain, and the discovery consisted in that thought, and in verifying it practically by experiment. For this the world is indebted to Dr. Morton, and even if the same thought in all distinctness and extent arose also in the mind of Dr. Jackson, at, or prior to that time, yet he did not carry it out by experiment and thus give it to the world ; and on that supposition it was the*

case of an important thought occupying two minds at the same time, one only of whom brought it out by experiment, and is therefore the discoverer."

This is undoubtedly the true merit of the discovery; and if so, what will become of Dr. Morton's claim, when contested with that of the late Dr. Horace Wells, of Hartford? We must believe that the Committee were unacquainted with the success which had attended the experiments of Dr. Wells two years before the date of Morton's discovery, or they would have given the credit to Wells upon the principle laid down by them in the above extract.

In the fall and winter of 1844, Dr. Wells was successful in performing several dental operations in Hartford, without pain, while the patients were under the influence of nitrous oxide, or exhilarating gas. These facts were familiar to the people of Hartford and vicinity, and no small stir was made about it there.

The following certificates from respectable persons residing in Hartford are all verified by affidavit, and place the fact beyond any reasonable doubt:

"I, John M. Riggs, surgeon dentist, of the city and county of Hartford, State of Connecticut, in the United States of America, being of lawful age, and duly sworn, do depose and say:

"That on or about the first of November, Anno Domini one thousand eight hundred and forty-four, I was consulted by Horace Wells, surgeon dentist, of the city, county and state as aforesaid, as to the practicability of administering nitrous oxide gas prior to the performance of dental or surgical operations.

"Thinking favorably of the suggestion, it was decided to make trial of the gas in question; and on the day following, per agreement, the protoxide of nitrogen was administered to Horace Wells, aforesaid, at his request, and I extracted one of his superior molar teeth: he manifesting no signs of suffering, and stating that he felt no pain during the operation.

"Encouraged, and gratified with the success of the first experiment, the aforesaid Wells and myself continued to administer to various individuals the said gas, and to extract teeth while under its influence, in the presence of several gentlemen, until fully satisfied of its usefulness and applicability in surgical operations. I further affirm that the said Wells avowed his intention to communicate the discovery to the dental and medical faculty, and, in pursuance of that intention, proceeded to the city of Boston, State of Massachusetts, for that purpose; whilst I continued to use the said gas with great success—the patients assuring me they felt no pain.

"JOHN M. RIGGS."

"I, the undersigned, resident of Hartford, Connecticut, do hereby testify, that, more than two years since, I submitted to the operation of having a tooth extracted while under the influence of nitrous oxide gas. According to the best of my recollection this was in the month of November, 1844. The gas was given, and the tooth extracted by Horace Wells, dentist, of Hartford; and I do further testify that the operation was attended with no pain whatever.

"MYLO LEE."

"During the winter of 1844, I learned that Dr. H. Wells, dentist, Hartford, Conn., had discovered the mode of extracting teeth *without pain*. This was accomplished by administering to the persons operated upon exhilarating gas or vapor, which, it was asserted, rendered the human system insensible to pain. At first I was incredulous of the fact, and received the assertions of individuals familiar with the operation with a

degree of distrust. Being, however, by invitation, a personal witness of the process of extracting teeth without pain, under this new mode, discovered and practiced by Dr. Wells with so much apparent success, I was induced to submit to a personal operation, that I might test its utility. The Dr. was most successful—extracting for me a large, firmly-set bicuspid tooth, without the slightest sensation of pain.

"I also witnessed, soon after, a repetition of the same process, by Dr. Wells, upon several individuals, accompanied, in every instance, with perfect success.

"F. C. GOODRICH.

"Hartford, March 27, 1847."

"Hartford, March 26, 1847.

"I hereby testify, that, more than two years prior to this date, on being informed that Horace Wells, dentist, of this city, had made a valuable discovery, by which means he could extract teeth without pain to the patient, which consisted in the use of stimulating gas, or vapor, I inhaled the exhilarating gas, and, under its influence, had six extracted without the least pain. I would further state, that for more than eighteen months from the time I first submitted to this operation by the application of gas, I heard no other name mentioned as the discoverer, except that of the above-named Horace Wells.

"J. GAYLORD WELLS,

"184 1-2 Main street."

"A little more than two years since, I learned that Dr. H. Wells, dentist, of this city, had made the discovery that by the use of an exhilarating gas or vapor, he could render the nervous system insensible to pain under severe surgical operations, and that he was using it in his practice with success. Having an opportunity to witness its effect upon several persons, during the operation of extracting teeth, I was so delighted and surprised with its manifest success, that I desired a trial of it upon myself. The gas was accordingly administered, and two carious teeth were extracted from my lower jaw, without the *least suffering* on my part; though ordinarily, owing to the firmness with which my teeth are fixed in my jaw, I suffer extreme pain from their extraction.

"WM. H. BURLEIGH,

"Editor of the 'Charter Oak.'"

"Hartford, March 25, 1847."

"TO WHOMSOEVER IT MAY CONCERN :

"We, the undersigned, physicians of the city of Hartford, State of Connecticut, U. S. A., do hereby certify, that we know, and have conversed with the persons whose names are appended to the above affidavits, viz., Wm. H. Burleigh, J. G. Wells, F. C. Goodrich, Mylo Lee, and place implicit reliance upon the statements made therein, by each of them, to wit: that the operation of extracting one or more teeth without producing any pain, whatever, was performed upon each of them, by Horace Wells, surgeon dentist, of this city, at or about the time specified by them respectively, in their several affidavits above referred to.

"We take pleasure, also, in expressing our entire confidence in the integrity of the said Horace Wells, than whom no person in our city is more favorably known, as a gentleman of honor and integrity. We know, moreover, that he has for several years past successfully devoted himself to subjects pertaining to invention and discovery.

S. FULLER, M. D.  
GEORGE SUMNER, M. D.  
BENJ. ROGERS, M. D.  
J. B. BERESFORD, M. D.  
H. ALLEN GRANT, M. D.  
WILLIAM JAMES BARRY, M. D.  
E. E. MARCY, M. D.  
C. A. TAFT, M. D.

DAVID S. DODGE, M. D.  
P. W. ELLSWORTH, M. D.  
GURDON W. RUSSELL, M. D.  
G. B. HAWLEY, M. D.  
E. K. HUNT, M. D.  
DAVID CRARY, M. D.  
JOHN SCHUE, M. D.  
HENRY LEE, M. D.

The true history of the discovery of a means to produce insensibility appears to be the following: In 1844, Dr. Horace Wells, a dental surgeon, in Hartford, Connecticut, seeing per-

sons when excited receive wounds without manifesting pain, and reasoning from analogy, was led to believe that a state of artificial excitement, might be induced, at will, under which persons might be rendered insensible to pain. His first experiment was with nitrous oxide gas, and after inhaling it himself for a time, he submitted to have a tooth extracted, which was, as he asserts, performed without any pain. He then performed the same operation for twelve or fifteen others, with the same results.

Being elated with his success, Dr. Wells determined to make it known to the profession and the world that all might have the benefit of his discovery. With this view he set off immediately for Boston, and first acquainted Drs. Warren, Haywood, Jackson and Morton, with the success of his experiments, (the two latter now claim the discovery.) While in Boston, Dr. Wells addressed the students of the medical class upon this subject, administered the gas to a patient, and extracted a tooth; but, as he states, owing to the gas bag being removed too soon, the operation was but partially successful, the patient experiencing some pain. The whole thing appears to have been ridiculed by the students and not heeded by others, (except Morton as appears from the sequel,) and this, producing a severe shock upon the sensitive nerves and disposition of Dr. Wells, threw him into an illness from which he did not recover for several months.

The following is Dr. Wells' account of the manner in which Morton first became interested in experiments of this kind:

"Dr. Morton, who is a dentist in Boston, *was instructed in his profession by myself*, about five years since, and I subsequently assisted in establishing him in the city of Boston, and after I had made the above discovery, I had frequent interviews with him; and he, being aware that I had relinquished my professional business in consequence of a protracted indisposition, requested me to instruct him how to prepare the gas which I had been giving so successfully in Hartford, stating that he wished to make a trial of it in Boston. As this interview was in Hartford, I told him to request Dr. Charles T. Jackson (with whom we were both acquainted) to prepare him some of it, as he was a chemist. Accordingly, Dr. Morton went to Dr. Jackson for the gas, who gave him the ether, as being attended with the least trouble. After one or two teeth were extracted, it was then introduced into the Massachusetts General Hospital, where a capital operation was performed under its influence with perfect success; which fact was immediately published in the principal newspapers of the day, with the names of Jackson and Morton. (who had, by a written contract, entered into a sort of co-partnership business in this matter) as the discoverers."

The people of Hartford were soon surprised to see it stated that a discovery which had been familiar to them for two years, had just been made in Boston by Drs. Jackson and Morton, and Drs. Ellsworth and Marcy of Hartford, addressed articles to the Boston Medical and Surgical Journal, and to the Journal of

Commerce in New York, stating the facts which had come under their knowledge respecting the operations of Dr. Wells.\*

Dr. Wells was undoubtedly the first to discover a means of producing insensibility to pain, and as such is entitled to the credit; but it does not appear that he made use of the best material for inducing anæsthesia. Dr. Morton, through the advice of Dr. Jackson, tried sulphuric ether, and the effects being more decided, and produced with much less trouble than when the nitrous oxide was used, gave it at once an eclat and notoriety which for a time completely eclipsed the fame of the true discoverer. Like Americus Vesputius who explored the Western Continent, after it had been discovered by Columbus, and on his return published an account of his exploits, by which means he succeeded in fixing his own name upon the whole broad continent, so Morton, adopting the great idea of Wells, retraces the steps which he had taken, trumpets to the world his success, and finally gives his own name ("Morton's Letheon") to the agent employed to re-produce the wonderful results. For the sake of public justice, we trust that the memorial of Morton will share the same fate which the petition of the female descendant of Vesputius met with in Congress but a few years since.

If it be admitted that Morton is the discoverer because he made use of an agent which was more simple in its mode of administration, surer in its results, and more powerful in its effects than the one used by Dr. Wells, what then becomes of the claim of Morton when contested with that of Prof. Simpson, of Edinburgh, who by a course of similar experiments, discovered that chloroform would produce the same anæsthetic effect, and was still more simple, certain, and powerful than even "Morton's Letheon?" We would not by any means detract from the credit due to Dr. Morton for the improvement made by him, by substituting the ether for nitrous oxide, or to Prof. Simpson for introducing the chloroform. They may, with all propriety, be said to have *discovered*—one by the suggestion of Jackson, and the other by that of Mr. Waldie—that these agents would place their subjects in this new state, (whether it be called Lethe or Anæsthetic we care not,) but we contend, by whatever name it be known, that it was first *discovered* and demonstrated by the late Dr. Wells, and that to him is due the whole merit of the discovery.

\* It also appears in an article "On the Modus Operandi of Medicines," written by Dr. P. W. Ellsworth, of Hartford, published in the Boston Medical and Surgical Journal, June 18th, 1845, that the thing was referred to as a well known fact.

## SOCIETY OF DENTAL SURGEONS OF THE STATE OF NEW-YORK.

A regular meeting of the society was held at the rooms of the College of Pharmacy on the evening of the first Tuesday in March. The attendance was very respectable although not so large as was desirable. The business which came before the society was very miscellaneous, as usual, relating principally to the management of the affairs of the society, procuring a suitable room for the meetings, &c.

Resolutions were introduced and passed by the society for appointing committees to report, at the next regular meeting, the best materials and methods for taking impressions and getting up castings for striking plates to fit the mouth. Two separate committees were appointed, that for reporting on procuring impressions was composed of Drs. Ambler, Burdell and Dodge, and that on castings of Drs. Lord, Hawes and Burrass. These reports will doubtless elicit considerable discussion which cannot fail to interest and instruct the members.

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### DR. CONE'S ADDRESS.

We have been favored with a copy of the Valedictory Address delivered before the students of the Baltimore College of Dental Surgery, February, 1849, by C. O. Cone, D. D. S., Demonstrator of Practical Dentistry. This address contains much useful and instructive advice and admonition to the class of students who had been in attendance on Dr. Cone's demonstrations for several months, many of whom were completing their preparatory studies, and were on the eve of departing to different sections of the country, and establishing themselves in the profession of their choice.

Without at all disparaging the importance of the Surgical and other departments of practice, Dr. Cone dwells mainly on the importance of a thorough and scientific knowledge of Mechanical Dentistry. He speaks of the shameful manner in which education upon this branch has been neglected, erroneous opinions which some entertain in reference to it, and the very bad practice which prevails in consequence. He cautions his students against the separation of this branch from the surgical, as has been recommended by some eminent members of our profession, and enjoins upon them to persevere in their efforts to master it in all its difficult manifestations. Mechanical Dentistry has been, by some regarded as a mere mechanical employment, and therefore degrading to the professional gentleman. We must confess that we do not view it in this light; great as is the skill required

in dental surgery to overcome the difficulties which there exist (and we must confess that we have been often baffled with them) in the mechanical department the dental artist will find ample scope for its employment. We have often seen good surgeon dentists but seldom good mechanical ones. If there is one who thinks he has mastered the difficulties which exist in the practice of the former, let him take hold of the latter, and he will find employment for the remainder of his ingenuity and skill for life. If good advice and good instruction will make good dentists, then the students of Dr. Cone and the Baltimore College should excel in their profession.

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### PLUGGING FORCEPS.

We have been shown a set of plugging forceps manufactured by Mr. Kerns, of Philadelphia, from the patterns of Dr. J. D. White, which are so constructed as to be applicable to cavities in almost any situation in the teeth. Plugging forceps have come into use very much within the last few years and have been found very serviceable in condensing the gold on the surface of a filling. Where they can be fairly applied they save much time and labor, and in many cases may be used without that danger of slipping which exists with the common plugger, and which in the hands of skillful men sometimes does great mischief. These forceps are for sale by Jones, White, & Co. No. 263 Broadway.

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### NEW FILLING FOR TEETH.

Mr. J. Robinson writes to the London Lancet that he has been very successful in treating aching teeth, when not permitted to extract them, with collodion and asbestos. His method is to let the patient first wash the mouth with warm water in which a few grains of bicarbonate of soda have been dissolved. He then removes from the cavity any foreign substance likely to cause irritation, and after drying the cavity drops into it from a point, the collodion in which has been dissolved a few grains of sulph. morphia. The cavity is then filled with asbestos and the whole saturated with collodion, over which is placed for a few moments a pledget of bibulous paper. By the evaporation of the ether the whole soon becomes solidified and forms an excellent non-conductor of heat, to, or from the exposed nerve.

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THE Commencement of the Baltimore College of Dental Surgery, took place on the evening of March 1st, at the College building. We have received a report of the proceedings, list of graduates, &c.; but it came too late for publication in the present number. It will appear in our next.

# NEW YORK DENTAL RECORDER.

DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

Vol. III.

MAY 1, 1849.

No. 8.

## COMMENCEMENT OF THE BALTIMORE COLLEGE.

[Communicated for the Recorder.]

The ninth annual commencement of the Baltimore College of Dental Surgery, was held on the evening of the first of March, at the College Buildings. Long before the hour arrived for the commencement of the ceremonies of the evening, the large lecture hall of the College was crowded with ladies and gentlemen to witness the ceremony of conferring the degree of Doctor of Dental Surgery, on the gentlemen who had given satisfactory evidence to the Examining Committee of their attainments and qualifications in the theory and practice of the science of Odontology, and to be admitted to that honor.

At 7 1-2 o'clock, the Faculty, Examining Committee, and graduating class entered the room, and were received with rounds of applause. After an impressive prayer by a Rev. Clergyman, the right to confer degrees, given the Institution by the authority of the State of Maryland, was read in Latin by Prof. Handy, and then the following list of candidates was announced as worthy of the honors of the College, by Prof. Harris, together with the subject of their theses, namely:

Chas. Wiley Ballard, M. D., New-York. Thesis—Physical characteristics as connected with dental operations.

Philip H. Austin, M. D., Baltimore. Thesis—Abuse of mercurial preparations.

M. A. Hopkinson, Massachusetts. Thesis—Causes and consequences of caries of the teeth.

J. U. L. Feems'ter, Tennessee. Thesis—Effects of diseased teeth on the general health.

A. A. Blandy, M. D., Ohio. Thesis—Nervous disorders.

J. H. A. Fehr, M. D., Kentucky. Thesis—General dental history.

J. F. Warren, Kentucky. Thesis—Medico-Dental education.

R. R. Sarns, South Carolina. Thesis—Dental caries.

Albion Martin, Maine. Thesis—Extraction of teeth.

M. Jerome Cherry, Baltimore. Thesis—Mechanical dentistry.

George W. Watkins, Georgia. Thesis—Professional excellence.

Thomas Littig, M. D., Maryland. Thesis—Eruptions of the teeth.

The degree of D. D. S., was then conferred on each, by Dr. E. Parmly of New-York, provost, with exceedingly appropriate advice.

The report of the Infirmary and Mechanical room of the College was then read by Prof. Cone, who remarked at its conclusion, that from the report it would be seen that the gentlemen graduates were not entering on practice to make their patients their school and their failures their instructors.

The valedictory address was then delivered by Dr. E. B. Gardette, of Philadelphia: in which he defined in a happy manner the mutual obligations of patients and practitioners to each other.

When Dr. Gardette had concluded, Dr. Philip H. Austin, on behalf of the graduating class, arose and addressed a few parting words to the Faculty and Examining Committee. Dr. A. spoke of the progressive character of Dental science, as of science in general, and of the obligations resting on every professional man to communicate the improvements, that young men starting therefrom, might be saved years of toil, and go on to greater knowledge. He alluded to the advantages in this respect of the young Dentist of the present day: and more particularly the advantages enjoyed in this Institution; advantages which, while it opens for him more immediate success, laid him under obligations to the Profession, to the College, and to the community, which the student should never lose sight of. "To the Professors," he said, "we owe a debt of gratitude for their unvarying kindness, unwearied attention, and generous forgetfulness of self interest, which the class would wish never to forget. With such feelings, we bid you gentlemen an affectionate farewell, and pass forth into the world, bearing before us that 'banner with a strange device—EXCELSIOR.'"

After the benediction, the Professors, Examining Committee, Students, and a few invited friends, retired to partake of a collation, served up in one of the rooms of the building.

### DR. GARDETTE'S ADDRESS.

Our readers must have noticed that the pages of the Recorder have not been burdened with the addresses and lectures which have so frequently been read or delivered before the various societies and colleges of dental surgeons; we feel, therefore, that no apology is due for the republication of the following excellent valedictory of Dr. E. B. Gardette, of Philadelphia, delivered to the students and audience assembled at the late commencement of the Baltimore College.

This address is so full of excellent sense, conveyed in such a pleasing and humorous style, that no person who is either a dentist or a dentist's patient should fail to peruse it. Dr. Gardette has long been

known as an eminently distinguished and skillful dentist; one who has ever aimed to maintain the dignity and respectability of the profession, and among the thousands which it now numbers we could hardly select one who better illustrates, in his practice, the superiority of *character* over *reputation*, the distinction between which he has so well drawn.

Besides the instruction and advice, intended for young dentists, Dr. Gardette's address conveys a very just and merited admonition to those who waste the valuable time of the dentist, and try his patience to its utmost limit by hesitating to submit at once to the operations which they go to have performed, as well as by their foolish questions and exorbitant demands for his immediate services, whenever it pleases them to submit to his manipulations—as if they were the only persons who had a right to them. Every timid patient should read, learn, and inwardly digest this portion of the Doctor's address before he finds too much fault with dentists for a want of patience and sympathy.

We commend this address to our readers as one of the most pleasing and instructive of its kind which has been published.

[ED. RECORDER.]

#### GENTLEMEN GRADUATES :

It has become a custom in the institution, of which you have the good fortune this year to be the graduating class, to address you in the language of congratulation or advice, (imitating our peers of other colleges,) at the moment of your separation.

Having accepted the flattering invitation of your faculty to fulfil this duty, I bring to it, I fear, but meagre abilities for the performance of my task.

It was the advice of Cicero, that in writing an oration, a man should "begin in the middle and work out both ends"—and if from my inexperience in such matters, I should, without designing it, pursue such a course, pray remember it is from one who perhaps has rather felt a pride in belonging to the plain practical class—a working man in contradistinction to a speaking one; I mean most especially with reference to our common profession.

You have listened this morning to a chaste, learned, and beautiful discourse, from the mind of a gentleman, and a classical scholar, which in truth leaves me nothing to say. But I honestly address you in a disposition to benefit you, and if success attend the effort in proportion to the strength and sincerity of this feeling, I shall have no cause to regret that for once, on this first and only occasion, I depart from the quiet track of individual or solitary labor and usefulness.

I am to look upon you, gentleman graduates, as dentists—not merely because you have earned diplomas from this college of dental surgery, but

because I have witnessed the work from your hands, in various departments of the profession to which you aspire.

But you are dentists without practice, (most of you at least,) in the true sense of the term; and it is in reference to the nice connection between the knowledge of a profession or business, and the exercise of its duties for the public benefit and advantage, as well as for individual prosperity, that I now propose to speak: for you will soon be called upon to test this question—the practical application of your knowledge—and will, possibly, derive some aid from the experience and observation of one who has passed through that ordeal.

It would often seem to be a singular error of judgment among men, in their mode of interpreting the true affinity between preparation and practice, that determines the amount and character of their success in professional life: they feel the influence of their decision for good or evil, from the period at which, like yourselves, they start as young dentists, carving out a course of duty, until that doubtful time when the public shall have placed them in enviable elevation, or cast them amid the greater numbers, that live, and die unknown, and unregretted.

To succeed in practice, then, let us look, for a single moment, at the nature of our duties.

We are called upon to prevent or remedy diseases in the human teeth, those sensitive and precious organs so closely allied to health and comfort with man, and even more jealously watched and valued by woman.

The operations of the dentist are necessarily more or less painful, and the nervous timidity and reluctance with which he is generally approached, claim at his hands both sympathy and indulgence towards his patients. Whilst inflicting pain upon the body, it is both a duty and a blessed privilege, as far as practicable, to soothe and divert the mind. The anticipations or preconceived estimates of physical suffering, are at times so strong and vivid as to take the place of reality: the imagination measures pain before we have experienced it, and with a dogged tyrannical will she even assumes the high judgment seat of the sensorium.

Manipulations upon living organs of acute sensibility, therefore, call for the exercise of something more than mere mechanical dexterity; a nice discriminating judgment, good taste, a knowledge of characteristics and peculiarities in poor human nature, titled or appareled as it may be, whether in great or small specimens, will give an operator the power to mitigate unavoidable ills, through pleasant and engrossing mental associations.

I recall at this moment a graphic description of a dental operation from the lips of a gifted and sensitive friend, which embodies the thought I would convey so truly, that I beg to quote him from memory. Thus he spoke:

“With my head immovably secured against the chair back, my mouth stretched to its utmost, and every nerve in my frame in the attitude of resistance, he sawed away at one of my strong back teeth with the industry and monotony of a wood sawyer: no cessation or interruption, no word of comfort or inquiry, no remark or reflection to interest the mind; but it was one continued, undisturbed, horrible grating of file against bone and enamel, which became unendurable agony of body and

thought. I could cheerfully have borne ten times the amount of actual pain in pleasanter company, and with something like sympathy or interest in the operator."

Supposing his preparatory knowledge and skill to be all that can be desired or acquired, the usefulness and success of a dentist will still depend somewhat upon the amount of interest and confidence he is able to inspire in those who consult him. And how shall he obtain this boon? how best accomplish so important a result. I answer—by establishing a high professional character.

And here let me say a few words as to the distinction I would draw between character and reputation.

The two terms (character and reputation) are commonly supposed to be synonymous, or at least so used continually, an error by no means confined to our vocation. It is a common fault, whether we look to other professions and the reputations or characters that men have formed for themselves, or whether we turn to the same features of social life.

Their reputations for wealth, the fictitious capital of the merchant or banker (more cunning than wise) who gets extensive credits upon his reputation, until stoppage or failure brings investigation; his accounts are balanced, and he is found sadly deficient in assets to meet the just demands against him. And when executors to an estate come to close the last accounts, heirs as well as creditors too often discover the distinction between the reputation for wealth and its reality.

Your character is an actual and important part of yourself—your reputation merely what others choose to make out and determine.

There are reputations for learning, for wit, for greatness, many of which "loom large in the distance," like ships at sea; and hence, perhaps, it is said, "no man is a great man to his *valet de chambre*." Close examination of the real substance, the characters of men, will make any one of you at least as good a judge as the menial just named, of the distinction between truth, which is character, and its shadow, which is reputation.

Men who seek to make professional reputations merely as a means of profit, (and I may not say in reference to the number of such, that "their name is legion,") you will readily recognize in the endless devices by which, in one shape or another, appropriate to time and place, they are constantly aiming to be before the public eye. As *soi disant* dentists, they are found in remote time at the corners of the most frequented streets, with a display of instruments, studiously dressed, a montebank with servant in attendance, not less remarkable than his employer for some outward indication of greatness, and both master and man equally busy in making reputation by deceiving the credulous and astonished crowd around them. Whilst the more or less dexterous charlatan mutilates the patient, his aid de camp (who may chance to be his brother in livery) is profitably engaged recommending and vending nostrums by way of reputation for both the devil and his drops.\*

\* If an apology is needed for introducing his satanic majesty into such good company, even figuratively, it may be found perhaps in a reminiscence of my childhood.

The hall of my father's house, my early home, contained among other pictures, one of a quack dentist of Madrid; it was an ancient painting of the Spanish school at the beginning of the eighteenth century, representing a group of many figures as large as

In more modern times we find that the facility of newspaper reputation answers his purpose better, and he has left the highways of large cities, to figure in the advertising columns of every public print in which he can manage to publish his name, his painless, wonderful cures and his moderate charges—and thus he makes reputation.

The *modus operandi* of these modern gentlemen is not so very different *in-doors* from the *out-door* practice of the ancient man of hooks and pelicans. To make reputation now a days, he rents a large and elegant house, far beyond his wants, and not unfrequently beyond his means; his internal arrangements are not only costly, but calculated to inspire the thought that he who has provided them possesses a knowledge of the sciences, or has some favorite pursuit as one of their votaries. For we are told that in the great cities of London and Paris, you find in his reception rooms, most valuable collections of ornithology, conchology, or numismatics, whilst their illiterate owner would be unable to explain the simplest feature of the science they refer to, and has had no part in the merit of their selection or classification.

You may recognize this eagerness for undeserved fame and success in almost every act of his life, and particularly at the beginning of his career: in his readiness to adopt all new experiments that may seem to promise business or popularity, in accommodating his practice to the dictation of each patient, in the eager proffer of his services, unsought and gratuitously, to gentlemen in other professions, and especially to medical men and clergy; a course which may be highly proper when dictated by personal regard or benevolence, or when professional services can be reciprocated.

Magnificent instruments, the handles adorned with pearl or ruby, not designed for use, nor particularly adapted in form or temper to the business of any operation, constitute another in-door device to make reputation; or, as one of these mushroom dentists has expressed himself, “to *take with* the southern people.”

But I willingly turn from this painful picture to its opposite; to the man who seeks with all his talents, his industry and skill, to establish a high professional character, and only cares for that reputation which is derived from, and belongs to, a good character.

He conscientiously prepares himself with a correct knowledge of the principles that govern his business; his arrangements for its practice are

life. The scene was the street of the Spanish capital, the quack occupying the centre, was in the act of drawing a tooth from the wide stretched mouth of his customer: he was an old sinner, with horrible expression of countenance, and wore an endless number of decayed teeth strung around his neck, trophies probably of former butcheries. His servant was the next prominent figure, a tall sallow goggle-eyed creature, holding a basin and towel in front of the victim, and was also distinguishable from the herd of starers around, by a high chicken feather in his gaudy cap, and the fantastical labels about his advertising person.

The wretchedness and suffering expressed in the features of the poor woman, were irresistibly painful to behold, and the expectant whose turn came next, was no less plainly indicated by his palm upon his cheek. But in the picture at least his turn never came, for there the agony of the pitiable female then being tortured was as permanent as the painter's canvass.

To my childish eye and fancy, this big picture was dreadful, and the faces of the old quack and his queer aid de camp, remain as lasting impressions which I can now compare to nothing but satan and one of his imps.

modest and consistent, he seeks to make friends by his good conduct, his courteous manners and correct habits; he aims to establish a good character in his profession and out of it, by an upright, frank, and manly course. His patients are sure to get the benefit of his best judgment in reference to each trouble about which he is consulted, and his honest hand will perform its duty with gentleness and ability. His advice and his work will remain, the one in the memory and the other in the mouth, as testimonials of good character; and each professional visitor will voluntarily aid in extending for him a well founded and enduring fame.

You will see him steadily at his post, with just pride and anxiety for the constant improvement of his operations; doing justice to the confidence reposed in him, by earnest efforts to relieve suffering and remedy disease, while at the same time he claims consideration and respect for his professional opinions and labors consistent with a true sense of their importance.

The reputation a man may create for himself by empty show and doubtful promises, is never so enduring as that fame which others are forced to extend to him as the unavoidable result of his own good deeds. The one is a credit for abilities which he may not possess, whilst the other is simple and just interest or return for capital advanced in the substantial and valuable form of benefits, conferred upon the community amidst whom he exercises his talents.

Thus in the distinction I have attempted to draw between character and reputation, have I not successfully pointed to the true mode of inspiring confidence, that great element of professional success, prosperity and usefulness. A man without a good character, may, it is true, for a brief space, have a good reputation; but with a good character he is not only more sure of better reputation, but he will have also the precious inward comfort of knowing that it is deserved.

I need not ask you which line of conduct you are disposed to pursue; the one having for its object the formation and establishment of high professional character, or the other leading to a weak ephemeral, money-making reputation. Your good sense has no doubt determined in favor of the right course, and therefore permit me to remind you, that this narrow path is the difficult one; it will claim at your hands the exercise of much patience, and bring you, perhaps, neglect and injustice at the commencement of your careers: it will often demand sacrifices, and the courageous practice of self-denial. But in the end, you will thus gain the inestimable reward of self-approbation, and the lasting respect and gratitude of all worthy acquaintances you may form in your path through life.

The general standing of the profession itself, of which you are now individual members, must depend greatly upon the characters of the men who represent it; and hence you have an additional motive to render yourselves worthy of the highest regard. Expect to borrow nothing from the reputation of your profession, but to lend it importance, dignity and value, by bringing to it the influences of your own good names. You will thus triumph over those narrow and prejudiced minds, still to be found in civilized intellectual communities, who will judge you, not

by your merits or your character, but by the grade or standing of your occupation, according to their estimate of it, or some such small medium of judgment, suggested by their own weak pride or false pretensions. Let a strong sense of duty and a just discharge of it, prove your value to the world, and you may then answer the illiberal and misjudging, in the words of the sage, who when informed of the dislike and injustice of his neighbor, said, "I will treat him so well and become so worthy of his respect, that he shall be compelled to esteem me."

All vocations or pursuits in life have their objectionable and agreeable characteristics—their shade and their sunshine, and it would be, no doubt, a more easy than profitable task, to point out the *ratio* belonging to that of the dentist, whether of pain or gratification. He that selects it for himself, must resolve to pursue it honorably and usefully, and find consolation in its pleasant features for the admixture of the painful or disagreeable.

I am disposed however to notice here, one great and just cause of complaint, and which in early life has been a sore trial to most of us; I do so the more willingly, as I may chance to convey, with due deference, a gentle lesson to some other listener besides the young gentlemen graduates, to whom I more particularly address myself.

I refer to the desire or practice of dictating to the dentist, rather than seeking his advice; going to a professional man as you would to a tinker or a laborer, and expecting to hire his hands to do that which is not sanctioned by his judgment. A man of intellect who has knowledge and experience in his particular vocation, is thus reduced to the level of a mere machine; he is bought, set in motion, and directed by the caprice and the money of his employer.

Our great Franklin has said, that "if you hire an individual to do a piece of work which he disapproves, you hire in truth but one-third of a man; his head and heart are against you, and only his hands are for you." The illustration applies equally to professional pursuits as to common labor, and Franklin's third of a man, I grieve to say it, is too often to be seen in the intercourse between patient and dentist.

It has been less difficult for me to point out the duties of our profession to suffering humanity, than to determine upon what is due from the public to the dentist; and expressing some views on that subject not long since to a distinguished gentleman, philanthropically interested in the question, he urged that they might be my theme on this occasion. Diffident and poorly qualified as I may be to satisfy his expectations, I am not willing entirely to disregard the wish of one who so deservedly holds a high station in this institution.

The relative claims of the dentist upon the community, not less than those of all professional men who do their duty, have not been properly regarded or duly estimated in this country by the majority of those who need and seek their services; and although I do not forget that it amounts to a common adage, that every man thinks his own trade the most slavish, and the most abused by the world, we may be allowed the universal privilege of complaining a little.

A distinguished divine, formerly of Philadelphia, whose extensive usefulness brought him in contact with very many people, placed a sign upon

the outside door leading to his study, with these words—" *be brief, time is short.*" I have heard, too, of a popular dentist in one of the great cities, whose ante-rooms contain printed directions, or little instruction books, how to behave oneself in his *sanctum sanctorum*. But without pretending to advocate, for an instant, what may seem an assumption of consequence in the latter, I can but think that the busy dentist may, with some propriety, imitate the example of the reverend gentleman, and remind his visitors, if necessary, that time lost is suffering to the patient in the chair, and a tax upon him who officiates.

There is an immediate and unavoidable connection in this subject with the social position of the dentist, and it is the general character of his situation, to which I beg to be understood as referring exclusively.

The well bred and well educated, are only a very small proportion of those who require the services of the dentist; his doors are open equally to such as neither know how to appreciate him nor the nature of his operations. He is ready to relieve all kinds and classes of persons, and he encounters them too in moods and tempers not *very* particularly calculated to promote pleasant or polite intercourse.

"There was never yet philosopher  
That could endure the tooth-ache patiently."

A strong sense of his duty, and the influences of benevolent sympathy, not less than the laws of hospitality (for the dentist is at his home) remind him to bear submissively the assaults upon his good nature and self-respect. But patience has its limits, even in the dentist, and when a *fond parent* returns to his office with a refractory child the fourth or fifth time, to have the same insignificant operation performed, and which, though requiring but a moment's time, has already wasted five or six hours in as many succeeding days, is it *very* wonderful, I ask, if the dentist ceases to feel much solicitude to relieve, or interest to serve the patient.

The preparations or educating of mind and feelings for enduring operations upon the teeth, is no part of the study of dental surgery, or of a dentist's duties, and parents mistake, we think, both their own and his position, when they expect all the persuading—the making up of the mind (to use the familiar phrase)—to take place in the operating chair.

The complaints in these respects, however, relating to the young and the extraction of teeth, are of small importance and the errors very excusable, when compared with the annoyances that "*grown up children*" too often inflict upon men, whom, be it remembered, they have voluntarily selected and applied to as their dentists; and I will only touch upon some of these, that you may be the better prepared to meet them in your approaching offers of usefulness to the people among whom you may practice.

You will be told, in no measured or cautious phraseology, that your profession has done more harm than good; that dentists have no feeling; that they seem to enjoy the infliction of pain upon others; and more often still you will be urged to give no *unnecessary* pain, as though it was entirely optional with yourself. Should you chance to be overrun with occupation, (the good fortune I sincerely wish you,) and your time necessarily engaged for some days in advance by those kind and considerate ones who in patient confidence are waiting your convenience, you

will still be importuned by late comers, to give them the hours which are no longer at your disposal ; not yielding to these entreaties, you will be called disobliging, cross, presuming, or perchance you may only perceive in the cold *hauteur* of some wealthy west-end republican, that you have given great offence.

Your professional advice will be sought, "*merely to know your opinion*" as to what is the best remedy in the case, and what the consequences of such and such a course : and these consultations would seem flattering to your standing and your judgment as a dentist. But in many instances this compliment is all the advantage you are to derive from your visitor, who from your office goes immediately perhaps to that of a more universal man, the barber tooth-drawer and chiropodist, and for the moderate sum of a few shillings, the operations you recommended is performed to the patient's satisfaction.

With your hands and your head full of business not to be satisfied or disposed of short of a fortnight's assiduous labor, you will have unexpected demands upon your time from persons who have "*just made up their minds*," and brought up their courage, to endure various operations ; the one to have any number of teeth and fangs removed, and an entire set of artificial teeth of their own selecting at once substituted ; others, to have performed that most indefinite and terribly complex duty to a dentist, which they so graphically express by—" *I want you to fix all my teeth to-day, sir.*"

You will, a few years hence, without doubt, realize better than you can at present, how singularly unreasonable such propositions, soberly made, are to the dentist who is fully occupied : and he, of all others, is the one most likely to receive such applications, from persons who seem to forget that there must be two parties to every agreement, as well as "two sides to every question," and that "*qui compte sans son hôte, compte deux fois.*" Whether coming from a distance or residing in the same town with you, they make their arrangements and calculations without consulting you, as to what is to be done, how it is to be done, and when it must be accomplished.

I spoke a moment since of influences connected with home and hospitality, and these terms remind me of some features of distinction between the professional life of the doctor and the dentist, which I beg to notice.

The visits of the physician being chiefly and necessarily at the houses of his patients, call forth the better feelings of the heart, arising from a grateful sense of his value ; he is in a degree, both a guest and a benefactor. The rooms are dusted and put to rights, the little ones are scrubbed, and clean aprons at least made to cover the spots beneath, before the time appointed for the doctor's daily call ; and when any of these evidences of respect are waiting on the physician's arrival, the apology for their absence is not forgotten even by the humble and uneducated.

Pondering jealously sometimes upon these things, and with envious eye gazing through the window of his prison-room at the medical man of his own age, as his handsome two horse easy-hung cab drives dashing by, the dentist might doubt whether the established custom of re-

ceiving rather than paying visits, has been to him a wise arrangement. Deprived of wholesome air to an injurious extent, and of the cheering influences upon health of body and mind derivable from change of scene and moving amidst the world of events and interests presented by a populous city, the dentist vainly claims sympathy for his close confinement, his sedentary habits, and the "wear and tear" upon his fame and depressed spirits. A few are found, it is true, whose robust health and elasticity of mind sustain them against such gnawings at the spring of life for a goodly number of years, but as a general rule, we believe the career of the dentist has been short, and its end melancholy.

The medical man may be said to hold his position in every family where his professional services have, year after year, brought him in contact with its members under their own roof, and I am far from disputing his rightful claims to such consoling notice. But the question has forced itself upon my mind, whether the intercourse between patient and dentist, if existing under the same circumstances, would not have placed him upon a similar footing with the family physician and surgeon. I merely throw out the suggestion here, without time to examine properly so nice and important a question in all its bearings upon the present system, which we know possesses very great advantages and recommendations.

The delicate subject of professional fees or compensation, is still open before me, as a broad endless page upon which to "score up" loud complaints; just and well founded exceptions to the small penny-wise policy of those who seek and those who offer cheap dentistry. Aye, who not content with merely seeking it for themselves, recommend it strongly to friends and acquaintances, and apply the gentle term of "exorbitant" or "unreasonable impositions" to all other kinds. The liberal patrons of our science, make bargains in advance for operations to be performed; they desire the dentist to undertake them "by the job," to "lump it," as they would hire a carter to remove rubbish, and put their own valuation upon the time and talents of him whom they honor with their preference.

There is too much to be said upon this branch of the evils that surround the practice of your profession, but many of which, having been remedied or regulated in some degree by your predecessors, you may be fortunate enough to escape: and yet I would not have my unwillingness to enter more minutely into the subject, for a single moment, attributed to a want of data to go upon, in an attempt to prove (time and opportunity being appropriate) that the well informed and faithful dentist who does his duty and whose fees are uniform, is not justly open to the charge so commonly made against him in the "hue and cry" of "extortion!" "extravagance," &c., &c.

The estimate of professional services, whether in the medical man, the surgeon, the legal adviser, (the lawyers know how to take care of themselves,) or the dentist, is surely not to be determined by each party that seeks him for aid or relief; if so, the standard of value would change often and singularly, varying according to the amount of liberality or gratitude; and the ability to give the "*quid pro quo*," would, we fear, rarely govern in settling the just pecuniary obligation for benefits conferred.

The views I have thus plainly expressed may possibly seem strange and almost incredible to you, young gentlemen, but they are, not the less, true delineations, taken from the book of experience: believe me, I have no desire to alarm you with an overdrawn picture of professional difficulties and annoyances, many of which we would fain hope originate only in the paltry characters of men, styling themselves dentists, and who have been trusted to the great disadvantage and sad regret of those by whom they have been employed.

But "there is yet balm in Gilead," and possibly I may assist you in discovering where it may be found.

Heaven, in dividing its gifts of good and evil on earth, has allotted, it would seem, an undue share of suffering to woman, of whose delicate organs you will have the care. Her teeth afflictions and her gratitude for relief from them, make her especially your friend: in her bright smiles and warm words of praise, you will find compensation for the indifference or injustice of men.\*

The human tongue is a great exaggerator, and proverbs have given wide-spread fame to that of woman in particular; but whether this be just or otherwise, there is certainly one sense in which the "unruly member" of both sexes will exaggerate good or evil, and that is in defence or examination of its own limited domain, the mouth. Within these narrow archways, a rough corner or sharp ragged edge, which to the eye seems as nothing, is to the delicate, searching and sensitive tongue, a serious inroad and most aggravating annoyance.

Hence the work of the dentist brings him, it may be said, immediately "under the tongue of good or evil report," and that too most frequently

\* It may not be considered out of place to relate here a professional anecdote of my father, amply illustrating what I have just expressed.

Some of you have perhaps sought accommodations as travellers at the "Mansion House," South Third street, Philadelphia, which was for many years so admirably kept by Mr. Joseph Head. That elegant building was originally the residence of William Bingham, Esq., an English gentleman of great wealth, and who boasted the possession of a magnet more precious than his mansion or his money, in the person of his most accomplished, excellent and beautiful wife. Mrs. Bingham, about the year 1788 or 89, a sensitive, timid person, who had been afflicted for a considerable time with inflammatory tooth-ache, was unable to obtain relief. She could not command the nerve necessary to bear extraction of the tooth, and yet was induced by her friends and physician to send for a young French dentist, then recently arrived in the city of Penn. A first, a second, and a third visit, in three successive days, were paid in vain; the patient was weakened and nervous, while the dentist was polite and persuasive. But Mrs. Bingham, in her courteous apologies for causing such fruitless visits, insisted that her resolution held good until she saw the dentist, but with a sight of him her courage all fled. As a little "*ruse de guerre*," the operator suggested that when her next resolve was taken, she should be blindfolded, then send for him and on his approach, without a single word, open her mouth. This plan was adopted with success, and whether from the small amount of pain, compared with heightened fears and expectations, or from the actual skill of the dentist, it matters not—the lady was relieved delighted and happy; she was grateful and generous, and with the kindest expression of her thanks she pressed into the operator's hand as they parted, a little silken purse. On examining his fee, unclaimed and most unexpected, he found it to be *fifty guineas*:—but he had acquired that which proved more valuable to him than a thousand such; a warm friend in a lady of rank, one who lent to, rather than derived it from, the great fortune and position she enjoyed.

If I might be permitted to give a name to my little family story, I should call it, "the poetry of tooth pulling."

in the head of woman. The association and responsibility is one to be proud of; as much to be dreaded in its displeasure, as it is to be blessed and relied upon in its movements of grateful approbation, for this is the "Balm in Gilead." Let your care and skillful manipulations respect its province: let your gentleness and good usage cultivate its friendly and warm interest: let your merits and estimable qualities of mind and heart deserve its kind and encouraging notice; and when you have done these things, when you have justly earned the respect and gratitude of refined woman's tongue, you have established your good characters, your fortunes are secure.

It only remains for me, in the name of the faculty, to thank this good audience, and offer you, gentlemen graduates, our best wishes and parting salutations.

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## REPORT ON PRACTICAL DENTISTRY.

(Continued from page 159.)

We closed our notice of Dr. Cone's report, in the last number, by an extract describing Dr. Harris's method of arching a plug over an exposed nerve. The plan proposed requires the nicest manipulation, and even with it is liable to fail sometimes, in consequence of the filling being forced down upon the nerve. Where the cavity is so situated that there is an abundance of room for operating, and where it can be distinctly seen, this may never occur if the operation is performed with care and skill, but in situations not so convenient of access, as for instance, on the posterior surfaces of the bicuspid and molars, especially in the lower jaw, it is useless to think of performing such an operation without great danger that some of the folds will come in contact with the exposed surface of the nerve. It would certainly be much easier to plug a cavity on to a convex gold plate placed over the nerve, and it could be done in much less time and with more certainty of not irritating the nerve, than by Dr. Harris's plan. But in whatever way a tooth, having an exposed pulp, is treated, we venture to predict, that in nine cases out of ten the pulp will lose all its vitality in less than six months. There is hardly a dentist in the land, possessing an ingenious and enquiring mind, who has not tried most of these plans, proposed by Dr. Cone for the treatment of exposed dental nervous pulps, and all have abandoned them with the same want of success. We do not hesitate to say that we have little faith in any of them. In our opinion the complete extirpation of the pulp from the crown and fangs, as far as practicable, and the filling of the whole, with gold, after allowing the wounded extremities of the vessels and nerves sufficient time to heal, is the best practice. Dr. Cone expresses great doubt about the success of this operation, and gives the opinion that all teeth treated in this way will, sooner or later, end in inflammation of some part of the periosteum with ulceration, and the final loss of the tooth. No one, we presume, will pretend that a tooth without a nervous pulp is as good as one with, but it is the object of the pa-

tient and the dentist to preserve such teeth as long as possible, and with the least possible inconvenience. There are many patients who will be well satisfied if such teeth can be preserved for one or two years, as they often submit to have artificial teeth inserted knowing that they cannot last a longer time than this.

Some dentists seem to think that a tooth is not to be filled unless it can be done in such a perfect manner as to last during the life time of the patient, and still they do not hesitate to extract such as might be preserved for a number of years, and insert artificial ones, clasped to sound teeth, with the certainty of destroying them quite as soon as the old ones would have broken away, if they had used their best endeavor to preserve them. This is not wisdom. The object of the dentist should be to preserve the natural teeth (with all their vitality if possible, if not without it) as long as possible. An intelligent gentleman once said to us,—“I do not wish you to hesitate to fill a tooth for me whenever you think that you can prolong its existence for six months.” We can show one tooth, at least, which was treated in this way at least *eighteen* years since, and which has never given the least sign that its pulp had been extirpated. It was filled by Dr. Bradley, in Providence, R. I.; and we, some years after, by consent, removed the filling, which was of tin, for the sole purpose of being sure that the pulp had been removed, and afterwards refilled it; since that time it has given no trouble, and is now perfectly sound and firm in the jaw. We could also show numerous cases which we have treated in the same way during the past four or five years, with equal success thus far. In fact, many of these teeth which were badly ulcerated before the operation, have been cured by it and are now healthy.

The following non-committal remarks occur, in reference to the use of arsenic, an article which has been proscribed by some of those who have been most foremost in the Anti-amalgam Society, whose injustice Dr. Cone has taken so much pains to defend. This may account for the peculiarly *shy* manner in which the subject is treated.

“The mode of application of this material is so familiar to the profession, that it would be unnecessary for a description to be given; but a few remarks in relation to its action, is not thought inappropriate. When administered in a proper quantity, and the absorbents do not spread its action, after a free contact, the nervous pulp will be found disorganized, and its structure infiltrated with serum; and although the touch of an instrument may give pain, when forced through the foramen which gives access to the pulp; by enlarging the orifice of this foramen, that the introduction of the instrument shall not exert pressure on the parts at the superior portion of the fang, where the nerve is still in an inflamed state, but not disorganized; it may be removed with little or no suffering to the patient. After a lapse of a short time, for the inflammation to subside in that portion of the nervous pulp nearest the superior extremity of the fang, without the confinement and consequent pressure of a serous fluid, which most fre-

quently takes place, to a greater or less degree, from the remaining organized part of the nervous pulp; the next step in the operation is prepared to be taken.

"It is evident to your report, that the use of this agent for the purpose under consideration, has been productive of serious evil, from its injudicious administration—not varying the quantity in accordance with the indications of the case, or entirely withholding its use, when the physical indications would pronounce such an edict. The practice of dental surgery demands the members of the profession, to subject every case to which they are called to dispense the benefits of their profession, to a careful investigation, in which the only witnesses admitted, to the total exclusion of prejudice and preference, should be science and facts, and the umpire correct judgment, to which the remedial agents should bend submission under all circumstances.

"An over dose, or improper administration of arsenious acid, is marked frequently by the injection of the tubular structure of the dentine, with the fluid portion stained with the coloring particles of the blood, which at the first gives the crown of the tooth a faint pink complexion, but after a short time, a chemical change is produced by the light and air, on the coloring particles of the injection, and it assumes a permanent purple hue.

"This result is most frequently seen in young patients, whose tissues are highly vascular, or whose system has been enervated by disease or injury, and most plainly made visible in the teeth of a delicate structure, and highly organized, although teeth of all degrees of density and complexion are capable of exhibiting this appearance. If absorption has taken place, from the quantity of the agent used, or susceptibility of the system to the influence of this agent, the tooth will develop pain when pressed, or comes in contact with any substance, and appears slightly elongated from inflammation existing in the *pero-dental* membrane; and the tissues surrounding the fang will present a greater or less degree of capillary injection.

"It is not unusual, when absorption has occurred, for the same, and the inflammation upon which the latter depends, to affect only a small portion of the *pero-dental* membrane, as is shown by the tooth not exhibiting tenderness when pressed with force, except in one direction. The inflammation of these cases may assume an active character, attended with great pain, and of that order which marks periosteal inflammation; and which is greatly aggravated by the inhalation of cold air, or the introduction into the mouth of anything that shall change its temperature. Thus, the inflammation may run its course, and if the tooth be not extracted, its fang left in a partially or wholly *necrosed* state, according to the extent which the *pero-dental* membrane has been implicated in the inflammation. The inflammation may, instead of assuming the character described, resolve itself into a chronic, or sub-acute state, subject to change from this to acute, and back again, when an irritant makes an impression on the

system, which is felt at this point; giving rise to exostosis, and other troubles dependent on slow and changing periosteal inflammation; but eventually loses its vitality, and the tooth its vessels of nutrition.

"This absorption, and attendant unfortunate results, is most frequently exhibited in young subjects, and those whose constitution indicates a predisposition to inflammation, and is lessened as the patient's health is firm, and constitution good, and his age near or past the meridian of life, when the absorbents have lost the activity of youth, and the vascularity of the tissues lessened. From a want of regard for these, and other indications and cautions, and the reckless manner with which arsenious acid is generally used, and its injudicious application, a large amount of injury is done to patients and the profession; and the success, which has been greater in the hands of Dr. E. Maynard, of Washington City, is to be attributed to the discrimination and prudence which marks its use in his hands, and the completeness of the subsequent steps of the operation."

The following is Dr. Maynard's method of filling the canal in the fang, and with a high appreciation of this gentleman's skill, we must say that we do not consider it the best. Let those who desire it try the operation as described by Dr. Cone, and see if such a plugger will not draw out the gold as fast as it will push it in. We prefer to prepare the gold in rolls, about the size of the calibre of the canal, cut into short pieces and insert one after the other, carrying each home and compressing it there with a small flat pointed instrument.

"After the canal of the tooth has been prepared and excavated to the superior extremity of the fang, and the cavity prepared for the reception of the gold; heavy numbers of foil should be used, by being prepared so as to enter the canal on the point of an elastic plugger, with slight irregular projections presenting themselves from the side of the instrument, for the purpose of conveying the gold up the cavity of the fang of the tooth; condensing it each time a fold is carried with the instrument to its place; thus continuing until the pulp cavity is filled into the crown of the tooth, when the operation is to be finished in the usual way."

Upon the subject of "Hill's stopping," our reporter is of opinion that this article "can hardly be brought into extensive use by the physiological and pathological dentist." The objection urged against it is the old, and false one, used against amalgam, that "any dental organ that can be *preserved* without injury to the surrounding parts can be plugged with gold." It is our deliberate opinion that the experience of every year among dentists is fast disproving the truth of the above assertion,\* but admitting its truth, does it follow that gold *should* in all cases be used?

\* During the past year we have learned from personal communication with three members of the American Society of Dental Surgeons, who signed the infamous "protest" against amalgam, because they knew nothing of its properties for filling teeth,

There is a large class of persons desirous of preserving their teeth, whose circumstances are such as to preclude the possibility of their paying for gold fillings; but who could afford to remunerate the dentist for using tin foil, or amalgam. Many parents, also will pay moderately for filling the temporary teeth of their children with Hill's stopping or with tin foil, either of which will preserve them as long as necessary, just as well as gold, but who would never pay for filling them with gold. Although opposed to the principle of secrecy in our profession, as practised by Dr. Hill, we are nevertheless bound to give every article a fair trial which comes into market, for the purpose of preserving teeth or otherwise benefiting our patients.

Upon the subject of extracting teeth we have the following excellent remarks upon the professional coolness and confidence which should inspire every dentist before he attempts it.

"To fulfil the obligations of the operator, and extract teeth *skillfully*, confidence in his own practical abilities, is an indispensable qualification. On examining a tooth to be removed, the operator should feel full confidence of success, and take every means to ensure this end; and if he has any doubts of the success of his ability, the arguments of a desirable result are much lessened; and whatever the operator determines it expedient to do, must be accomplished with unbending firmness, permitting nothing to surprise him in the discharge of his duty, which shall produce vacillation of judgment, but be prepared for every accident and disappointment that may throw itself in the way to defeat the purpose, as if waiting in expectation of such, ready to overcome all impediments, by a ready applicability of means to the end, with unflinching determination and confidence

"To secure the ends above named, the operator demands a familiar knowledge of the pathology of dental and buccal disease, to enable him to determine the amount and character of opposition or facility which they may offer in the performance of the proposed operation; and the physical indications, which can alone form the means of determining the diagnosis of the case, and establish, before an effort is made for the removal of the organ, the force with which the tooth will resist the separation of its particles from the surrounding socket; that the most effectual means may be adopted and chosen, to overcome, with facility and safety, the strength of opposition which may be offered.

"When the operator has attained the above qualities, he is prepared to institute inquiries in relation to the merits of different extracting instruments."

that they have since become convinced, either from experiment or observation, or from both, that it is an article "more sinned against than sinning," that it is now their deliberate opinion that there are cases occurring in the practice of every dentist, in which it is not only his privilege, but his duty to use it, if he would do his best to preserve the teeth of his patients. They have, therefore, either resigned their membership, or are about to do so, and we may add that there are few members left who are their superiors in professional skill or high moral principle.

Then follows a description of the *modus operandi* of the turnkey, and the difficulties attending the use of this instrument. The writer states that it has now been very generally abandoned by the profession for the use of the forceps. Dr. Cone prefers the forceps of Dr. Harris to those of Dr. J. F. Flagg, who first introduced into general practice a complete set of forceps, adapted to the necks of all the different classes of teeth; these have been improved and modified from time to time by instrument makers, to suit the caprice or fancy of dentists, but the principles of Flagg's forceps are retained in all except perhaps one or two. The instrument known as "Harris's Forceps," is a very convenient one for extracting the left inferior molars, the operator standing on the right side of the patient and supporting the jaw with his left hand, while the forceps cross the lower jaw from the right side and embrace the teeth on the left. This instrument is equally applicable to both sides of the jaw.

Another improvement upon the forceps, and which is not noticed by Dr. Cone, we have found very convenient in a few cases, which without it must have given us great trouble. This is the screw adapted to the forceps by Dr. Hulehen, of Wheeling, Va. When one side of a fang, firmly set in the jaw, is slivered off high up so that the beak of the forceps will not catch above it, the screw is inserted in the root and made to act in its place, while the other beak embraces the unbroken side, giving a firm hold upon the fang by which, with care, it may generally be removed.

We are pleased to see that Dr. Cone goes decidedly against the employment of anæsthetic agents in the minor operations of dentistry or surgery. His remarks upon the abuse of these articles, and the consequent disgrace brought upon the profession generally, are very just and true, and we cannot see why Dr. Cone and the members of the American Society of Dental Surgeons, if they would be consistent, do not issue a "protest" against it and pledge themselves not to use it for the extraction of teeth or their fangs.

If amalgam is a poison, chloroform is much more so; it has killed ten to amalgam's *one* (?) If the use of amalgam has given quacks an opportunity to practice upon the credulity of the public, so, according to Dr. Cone's own showing, have anæsthetic agents. Witness the following:

"Thus every mountebank, who digs out a corn, and dignifies himself with the title of chiropodist; every itinerating dentist, who gouges out a tooth or fills a cavity with amalgam; or any thing that can creep, or crawl, or sneak into any of the unguarded sanctuaries of medicine, can arm himself with an inhaling apparatus, and a bottle of anæsthetic material, with which he expects to prey on the public; and the rush to his rooms, by credulous patients, to wait their opportunity for the indiscriminate, or more properly mechanical administration of these narcotic agents, would not suffer in comparison with the attractions of a *circus* in a country town, or the crowded infirmary of an itinerating

lecturer and “curer of consumption;” and if it was not for the disgrace to the profession, and danger to the patients—the gravity with which they announce that the use of these agents, in improper hands is dangerous, but in theirs perfectly safe—it would be most amusing.

“Your report desires it to be distinctly understood that the point of discussion rests on the abuse of anæsthetic agents, and the consequent disgrace brought on the profession generally, and the danger and injury to patients from their indiscriminate use; and the report would urge the seal of disapprobation to be placed on such practice by this association; that the honorable portion of the profession shall not suffer with those guilty of indiscretion, to call it by no harsher name.”

Here are the very arguments which were used against amalgam. Now, gentlemen, if you have been in an error about amalgam retract like christians and do justice to those whom you have injured; but if you are sure that you are right go ahead, and cause “the seal of disapprobation to be placed on such practice by this association,” in the same *form* and manner that you have placed it upon amalgam.

In cases of hemorrhage after extraction, the report recommends the waxed cloth cones of Dr. B. B. Brown. He also speaks approvingly of Mr. Cloburn’s solution of gutta percha in chloroform, when applied to prevent exudation of blood from the capillaries, but here both the solution and the “*liquid adhesive plaster*” are useless, for while the blood is flowing neither will adhere, they must be applied to dry surfaces, which must remain dry until the solvents of the adhesive compound have sufficiently evaporated to cause it to adhere.

Much space is occupied in the report, in describing the improvements which have been made in the instruments used for surgical operations upon the soft parts in and about the mouth, such as those for hare lip, cleft-palate and uvula, &c. Many of those noticed are by Dr. Hulihen, who has acquired a just celebrity for operations of this kind.

Those who take an interest in operations of this kind, as all good dentists should do, will find most of these improvements described in the American Journal of Dental Science. We have thus far noticed in review the most important subjects treated of in this report with the exception of that which belongs to the mechanical department. As we have already devoted to it all the space which our limits will allow, the remainder will be deferred until another number.

MAY 1, 1849.

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## TEETH DESTITUTE OF ENAMEL.

Dr. E. H. Peeble, writes the Dental Register, that a set of teeth had come under his observation, which was entirely destitute of enamel; the patient also stated to him that her father's teeth were of the same kind. They presented the appearance of healthy dentine, being soft and easily cut with an instrument, but were used for masticating all kind of food with impunity.

A case came under our care some twelve years since, where the two superior central incisors were entirely destitute of enamel, and quite rough and uneven on the surface. One of them had begun to decay in front, which was filled with gold, completely arresting the caries. As the person (a young lady) grew older the bone of these teeth became changed to a dark shade, which, contrasting with the healthy enamel of the adjoining teeth, annoyed her so much that she determined to have them cut off and replaced by artificial ones. She was dissuaded from this, however, and by means of smoothing and polishing their front surfaces, they were, for a time, made to look very well, but they gradually became colored again, presenting the same unsightly appearance as before, and as the filing and polishing had made them more sensitive to heat or cold, and also to sweets and acids, (the effect of which was perhaps somewhat exaggerated on account of her strong desire for better looking teeth,) and as she had arrived at that age when personal appearance becomes a matter of some importance to young people, we determined to gratify her in this request. They were accordingly removed and new ones substituted much, to the gratification of the young lady and all her friends.

We learned from the mother of this young lady that the crowns of the temporary teeth, formerly in the same position, were entirely destroyed by caries several years before the permanent ones made their appearance, and that the fangs caused great pain with inflammation and ulceration of the gums. They finally protruded through the gums at their superior extremities, and were punched out after the permanent ones had made their appearance behind them. As the person had enjoyed the usual health while a child, and as all the other teeth were well covered with enamel, it is reasonable to suppose that the local inflammation caused by these dead fangs destroyed the sacks which secrete the enamel before it had been deposited upon the rudiments of the new teeth.

## DENTAL OPERATING CHAIR.

We learn from the Boston Medical and Surgical Journal, that Mr. N. C. Fowler, of that city, has invented a "Boston notion," which combines a variety of mechanical conveniences for itinerating dentists. It is a chair or trunk containing a "workshop in miniature," and is so constructed that it may be easily changed into

"A bed by night, a chest of drawers by day."

It is to be submitted to the judgment of the faculty of the Baltimore College of Dental Surgery, and if they can have their teeth extracted in it without pain, sleep soundly on it the night after, and relish a hearty breakfast from it next morning, we have no doubt they will recommend it highly, in which case the fortune of the inventor will undoubtedly be made. We have examined a number of "notions" of this kind, which were designed for various purposes by a slight change in the position of the different parts, but have generally found them like a jack-of-all-trades, good for no particular use or purpose to which you can put them. Mr. Fowler's "*notion*" may, however, be an exception.

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 PREMIUM FOR THE BEST TEETH.

At the last annual meeting of the Mississippi Valley Association of Dental Surgeons, a premium, to consist of a gold medal of the value of Twenty Dollars, was offered to the manufacturer of artificial teeth who should transmit to the corresponding secretary, E. Taylor, of Cincinnati, before the first of Sept. 1849, the best lot of teeth, not less than one hundred, to consist of equal proportions of gum teeth, molares, bicuspides, common plate, and pivot teeth; and for the second best lot of the same number and character, a silver medal of the value of Ten Dollars.

We would like to amend this offer by adding that the teeth receiving the first premium should be a decided improvement upon any of those which are now and have been for many years in the market. The American and other Institutes give premiums to the persons who exhibit the best teeth from year to year; but the effect has not been to improve the manufacture for many years. In our opinion this giving of premiums, diplomas, &c., to manufacturers and mechanics for articles no better than can at any time be found in the market, because they happen to be the best specimens presented, has not the good effect desired; but tends to deceive the public, by giving the fortunate competitor an opportunity to advertise the articles as the very best which can be procured, because they have received a premium, while the facts often prove that those who manufacture the best, relying upon their superior merit, as a sufficient recommendation are the least anxious to procure these premiums, and consequently they are often given to the maker of an inferior article. In all cases the giving of

premiums should be restricted to such only as have made some decided improvement over articles of the same kind already in the market.

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### FILLING DOUBTFUL TEETH.

A few days since a lady called at our office desiring an artificial tooth in the place of one of her anterior superior bicuspid. We first saw this tooth about ten years since. It was then denuded of its gum and more than half the length of the fang, was well filled and stood tolerably firm in the jaw. Since that time we have seen it frequently, and have watched the progress of absorption around the root. There was no tartar about the fang, no disease in the gums, and no appearance of absorption around any of the other teeth; but it has gradually gone on around this tooth until it finally fell out by its own gravity. Some two years since, the last time we saw this tooth in the mouth, the gum was entirely gone from the external surface of the fang quite to its superior extremity, and it was very loose, but, as it gave no trouble, and as the lady was anxious to have a tooth in that place we did not urge its extraction. In answer to our enquiries how long the tooth had been filled, and whether it had been sore or painful, she stated that as near as she could now tell, (reckoning by the age of her oldest child,) it had been filled about twenty-two years; that for several years after there was a small pustule which occasionally discharged pus, and that the tooth was at times in an irritated or slightly inflamed condition, but that it had never given her any pain "worth speaking of."

On examining this tooth (for she brought it with her and wished to have it reset,) I found it well filled with tin foil, slightly oxidised on the surface, but on the whole in a fair condition to have lasted at least ten years longer. The pulp cavity was not filled, nor could I perceive that the bone around it had decayed in the least, nor was there any absorption about the extremity of the fang; the form of the tooth, both external and internal was as perfect as if it had been extracted at the time when it was filled.

The history of this case, simple and common as it is, forces upon the mind two or three reflections.

1. Is it not the duty of the dentist to make an attempt to preserve all teeth in this condition? It was not usual, at the time this tooth was filled, to attempt to save a dead tooth, and the dentist who filled this, recommended, at the time, that it be extracted; but finally yielded to his patient and filled it with "soft filling," telling her, at the same time, that she would have to lose it in a few months. We believe, if the operation had been as common then as it is now, that cases like the above would be of frequent occurrence, and that those who practice twenty years hence will see many such.

2. What would have been the consequences if the dentist had ex-

tracted this tooth and replaced it by an artificial one attached to the remaining healthy ones? By this time she would probably have lost two or three more by the action of the clasp or ligature, which was at that time frequently used, and been subjected to the trouble and expense of having it reset two or three times, while the irritation of the plate upon the gums and necks of the teeth would produce more local disease and trouble than the ulcerated root. True, as this was a bicusped tooth she could very well have done without it; but the same state of things which we have supposed, would have existed if it had been a central incisor, which she could not have done without. We believe that extracting teeth, in the wholesale manner, which some do, is the very worst kind of practice. The business of the dentist should be, not to sacrifice teeth, but to preserve them. We speak now of teeth having crowns remaining, large and strong enough to sustain good gold fillings, and we do but express our convictions, formed from experience in practice, when we say that there is hardly a case, among the incisores or bicuspidēs, so badly inflamed or ulcerated that it may not, by proper treatment, be cured and made useful for many years. Very many molares may be treated with the same success. But in all these cases the dentist must be very guarded in his prognosis, for many patients will not submit to the treatment until the operation is finished; but disappear after the pain has subsided and the severity of the inflammation has been subdued, remembering only the promise made by the dentist, that he could cure and preserve the tooth, and forgetting the part which they themselves have got to perform. Thus when again inflamed the dentist is blamed for not extracting the tooth when he was solicited to do so. Hence we should never attempt operations upon teeth of this kind, except for such as are so anxious to preserve them that they are willing to submit to great trouble and inconvenience, if need be to accomplish it.

3. Is it right or proper for a dentist to refuse, under any circumstances, to fill a tooth with any substance but gold, when a cheaper material will preserve it just as well, as long as it can remain in the jaw? We regard such a dentist in the same light that we would a tailor who should refuse to make a coat from cloth below a certain quality. The above case shows that teeth may be preserved *twenty-two* years with fillings of tin foil, and if so, why should not the poor, or such among the rich as desire it, have the privilege of saving the extra expense, both for material and labor, which is incurred when gold is employed for the filling of large cavities in the teeth? Besides, it is believed by many of our best dentists that tin foil will, in many cases, preserve teeth longer than gold when used in the very best manner. This may be owing to a slight oxidization in the cavity, which in some degree counteracts the inflammation in the boney structure of the tooth.

Those who have formed the habit of operating in any particular way, are very seldom prevailed upon to change, and we do not expect

therefore that those who have all their lifetime practiced extracting every tooth in which the pulp was exposed or destroyed, will now attempt to save them; but with the young, who are to succeed them, we expect great success and great improvements in this branch of practice.

### NEW ANÆSTHETIC AGENTS.

Mr. Nunnally, of Leeds, it is said, will shortly publish a paper announcing some newly discovered anæsthetic agents, intended to be used as substitutes for ether and chloroform.

*Common coal gas*, he states, is a "safe, efficient and easily managed anæsthetic. It is inhaled without any difficulty, although the smell is at first unpleasant, and to some extremely disagreeable." The coal gas is the proto-carburet of hydrogen, and cannot long be inhaled without producing fatal effects.

*Chloride of Olefiant Gas*, or *Oil of Olefiant Gas*, is another substance more recently discovered, and said to produce all the anæsthetic properties of chloroform, with comparatively little danger. "It is pleasant, potent, and speedy in its action. While a smaller portion of it than chloroform will produce a sufficient degree of insensibility; a large quantity may be given with impunity. In appearance and smell it is not very dissimilar from chloroform, though its composition is different, being four atoms of carbon, four of hydrogen, and one of chlorine."

The chemists and philosophers in Europe have, with few exceptions, taken the deepest interest in the subject of anæsthesia, and many are now extending their researches and experiments to every substance supposed to possess properties analagous to those anæsthetic agents already known, in hopes of discovering some material or compound which can be used without the disagreeable and dangerous effects which result from the use of ether or chloroform. We do not, however, believe that any agent can be found capable of rendering a person entirely insensible to pain without danger of fatal effects if pushed too far, especially upon a diseased subject.

An agent which can produce such a powerful effect upon the sensitive nerves as to suspend entirely their function, must necessarily affect the motor and respiratory nerves also, although the effect may not be so speedy, yet if pushed a little too far the danger will be imminent.

We are glad to learn that most of the dentists who used these articles to a great extent when first discovered, have now almost entirely discontinued them, and that calls for them are now becoming very rare. This effect has been produced by the many fatal cases which have been recorded in the daily papers.

*Manufacturer of Mineral Teeth.*—It will be seen by the advertisement of Mr. J. M. Crowell, that he has removed from Park Place to No. 634 Broadway. His blocks are fully equal to any we have seen, and he promises to supply all orders with punctuality and dispatch.

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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JUNE 1, 1849.

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## LETTER FROM DR. A. HILL.

Norwalk, April 27th, 1849.

DR. C. C. ALLEN,—

My Dear Sir :

I have been reading with attention, an article in your last Recorder, on the use of Amalgam, in which the author claims the superior utility of that material for filling *certain* carious teeth, by him specified, over *all and every other kind of filling*. This seems to be a well written article, candid and manly, so far as the expression of opinion is concerned, and the cases therein specified, as those in which that article can be used to advantage, are as well and as strongly put, as they can be. I am pleased with the manner and spirit of the writer, although I know not who he is. Yet I wish to say, that the *peculiar* cases named by him, are *just the cases*, in which (in my judgment,) "Hill's Stopping" is superior to every other material, not excepting amalgam of silver and quicksilver, so much extolled by him.

Now, if the writer, whoever he may be, feels sufficient interest in the matter to have it tested, and will give me an opportunity to do so, I shall feel great pleasure in undertaking to *demonstrate* to him—or any one else, the correctness of my opinion upon this subject.

I take the liberty to inclose to you, a small sample of our compound, which I desire you would try, in any case where it can have a fair chance, (I mean this for your own satisfaction,) and then, condemn or approve, as its merits may deserve.

You will find it excellent in *every* case where a stopping is required.

Yours, very truly,

A. HILL.

TO THE DENTAL PROFESSION.

Having received numerous and frequent communications from members of the DENTAL PROFESSION in different parts of the country, asking for information relative to our new compound for stopping carious teeth, since the issue of our circular, one year ago; we propose to

bring together in a concise and comprehensive manner, such information as may seem most desirable, and forward to each member of the profession, as far as we can learn their several localities. As to the nature of our compound, we state as follows:

1st. It is perfectly harmless, both as it respects the teeth and the constitutional health. This will be so evident to every one, when the materials are known, as to admit of no controversy.

2d. It is very easy of application, being introduced into a cavity in a plastic state, and hardening as soon as it is packed.

3d. It can be applied with ease to the merest shells of teeth, and its adhesive property is such as to be retained without difficulty.

4th. It can be made so near the color of the teeth, that an unpracticed eye can scarcely detect any stopping at all.

5th. It is altogether *impermeable* to the fluids of the mouth, and, so far as the strongest tests have enabled us to judge, *perfectly insoluble*.

6th. It is comparatively a non-conductor of heat; and, in this respect, possesses a decided advantage over metals of every description. Hot or cold drinks do not effect even the most sensitive teeth, when perfectly stopped with this material.

7th. It does not *shrink* when placed into a tooth, so as to admit either air or moisture.

8th. Its specific gravity is less than that of metals, approaching very nearly the specific gravity of the tooth itself.

9th. Its *extreme toughness*, and wonderful tenacity, are truly astonishing; though not absolutely hard like enamel.

It has been subjected, (under our own eye,) to the *severest chemical tests*, with such results, as to deepen the conviction of its *durability* and *permanence* as a stopping for carious teeth.

It has been examined by, and its materials made known to several of the most distinguished dentists in this country; and, so far as they have been enabled to judge, from experiments submitted to their examination, they have unhesitatingly given their opinion not only that the material is *perfectly innoxious* and *safe*, but that in reasoning from its nature, *they could not see why it should not stand against the fluids of the mouth*.

It is perhaps, unnecessary to enumerate all the purposes to which it can be advantageously applied, as the experience and necessities of every dental surgeon will readily suggest to his own mind the different and peculiar modes of its application.

It is believed, that in *every case* where *amalgams* are thought to be necessary, this compound can be used with *greater satisfaction*, and *certainly, without the slightest injury*.

For stopping the *temporary teeth* of children, and thus preserving them against a numerous train of evils, we know of nothing which for *convenience, safety*, and the ease with which it can be used, that will compare with this material. Every dentist knows that thousands of

*deciduous* teeth are sacrificed every year, for the want of some such material to stop them.

Comparatively few are able to incur the expense of gold stopping in such cases; and among those who are able, many are *unwilling*. But if patients are found both *able* and *willing*, the children are *too timid* and *too young* to submit to the necessary manipulation.

Here, then, we offer to the profession that which is confessedly a *desideratum*, and feel the most perfect confidence that it will supercede the use of every other article for this purpose.

Where teeth are worn away by clasps, and artificial sets are dependant upon them, it cannot fail to answer a most valuable purpose. We have used it in such cases with great satisfaction.

We hesitate not to say, that this is a REMARKABLE COMPOUND, as to its nature and usefulness. And with the improvements which we expect yet to make in its preparation—judging from the past—we most firmly believe, that the Dental Profession will have but little more to expect, with regard to a stopping for carious teeth.

No one can use it long, without feeling that a great step has been gained—and a discovery made in this department of Dental practice, truly valuable.

We desire to be *modest* and *moderate* in our claims; yet with the experience of eighteen months past in our minds and the facts, which *we are prepared to demonstrate*, in our possession, we can scarcely refrain from making those statements, which might seem to many, either like infatuation, or an attempt to deceive. But we have too much at stake, to play the part of knaves, in this matter—and too good an opinion of ourselves to suppose that we are entirely deceived. We are however, ambitious to succeed, and extremely anxious to compass the great matter in question.

We have used this article, in hundreds of cases, with the completest success, and entire satisfaction, and can exhibit to the inspection of any one, some of the most beautiful and perfect stoppings, ever applied to a human tooth.

It is but justice to ourselves however, to state, that in the course of our experiments (which have been very numerous) we have introduced *certain compounds* which have been *less* durable and satisfactory than others. But this was unavoidable, and *altogether unintentional* on our part, and cheerfully corrected in every case, that has come to our knowledge. But even this seeming misfortune, is not without its value; inasmuch as it enables us to correct and obviate a difficulty, otherwise unknown and mischievous. The article which we at *present* prepare, and use, is unlike the former in some respects, and we think *very much superior* to it. This will be perceived at once, by those who have used our first material.

In the preparation of our compound, we have laid the metallic, the mineral, vegetable and animal kingdoms all under contribution, with a desire to extract from each, and every one of them, that which should

aid us in our labors. And we here present the best, which we at present possess, premising, that at no very distant day, we anticipate the grand ultimatum of all our labors in the desirable achievement at which we aim.

A. HILL, D. D. S., & S. G. BLACKMAN.

*Norwalk, Conn., April 6th, 1849.*

We stated in a number of the Recorder published in July, 1848, that we had received from the agent of the manufacturer, specimens of the above filling, and had inserted it in several teeth. Some of these teeth we have since extracted, from pain arising from inflammation about the fangs, but this was no fault of the filling, any more than if they had been filled with any kind of foil, or with mineral paste. In one or two cases we used it when gold foil could have been conveniently used, for the purpose of testing its qualities as a permanent filling, these we have not since seen. We feel bound to test every new thing which is introduced to the profession, where there is a reasonable supposition that the article is an improvement, notwithstanding we may disapprove of the *manner* in which it is introduced, and if after thoroughly testing it we find that it answers, in any peculiar case, a better purpose than the material which we have before used, we consider it our duty to give our patients the benefit of it, although it may compel us to purchase of the patentee or manufacturer, the right to do so.

We have not yet found that "Hill's Stopping" possesses any great superiority over other materials which have long been in use, and have not therefore felt bound to use it to any great extent. In a few cases where patients are anxious to prolong the existence of a shell of a tooth for a short time, until the rest of the teeth give way, that all may go together, it may prove a useful material, as it can be inserted with much less trouble than gold, and preserves to the shell a better color than amalgam; but for a permanent filling in a live and healthy tooth susceptible of retaining gold, we should never think of using it, excepting as an experiment, until after such experiment had demonstrated its superiority to gold. Had Dr. Hill made no secret about the manufacture of his stopping, but published the recipe and supplied the market with the material, if he wished to make money in this way, at a reasonable price, we doubt not it would have been favorably received, and almost every dentist would have given it a fair trial, while most of them would no more have thought of making it

themselves than physicians do of preparing their blue pill or diachylon.

The Dentist, in his legitimate practice, if he associates with others, is constantly receiving from them new ideas, which materially improve him in his business; with what show of fairness or justice then can he refuse to reciprocate, when by his industry or talent he is fortunate enough to take a step in advance of his brethren in the art or science of dental surgery.

The above remarks are general, and not intended to apply to Dr. Hill (with whom we have always been on the best of terms and desire to remain so,) any more than to others, who have secrets or patents in their business. We should be glad to see every society of Dental Surgeons in the country expell any member who should patent any instrument, or peculiar method of operating, or refuse to impart to another dentist, in good standing, any facts which he may possess relating to the science of dental surgery; and until this is done, we do not look for any great improvement in professional feeling. Brethren of the same family will never agree while they are striving to make money out of one another.—ED. RECORDER.

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### AMALGAM FILLING.

MR. EDITOR, —

In the January number of the Dental Recorder I endeavoured to show the improbability that an amalgam of silver, when used for filling carious teeth, would ever produce the specific effects of mercury on the constitution; and that cases of inflammation, which arose from dead and irritating fangs, had sometimes been mistaken for salivation. In the February number I endeavoured to show, by cases which had come under my own observation, that amalgam will preserve a carious tooth, if properly treated, as long as any filling which can be put into it; and in the April number I have described several classes of decayed teeth in which I consider amalgam filling superior to any material with which I am acquainted. The best method of preparing the materials to form amalgam, and the manner of inserting it in a tooth, are subjects of importance upon which the success or failure of the filling so much depends, that I propose now to give your readers my views upon these topics, and then leave the subject with them to treat in any manner they please. In the remarks which have been submitted, I have given the result of my own observations and practice for the last fifteen years, and the reflections which have arisen in my own mind upon the subject. I have taken no active part in the controversy upon the subject of the merits of amalgam, which

has unhappily divided our profession for the last few years; but have seen in the manner in which that controversy has been carried on much deserving of censure, and some things entitled to praise on both sides, so that I could not espouse the cause of either. Let us hope that the acrimony which has been shown on both sides will never have cause to be manifested again, but that the subject may continue to be examined in a candid, impartial, and strictly scientific manner, until the respectable portion of our profession is united in its opinion of the merits or demerits of amalgam for filling teeth.

Since the introduction of amalgam many attempts have been made to improve it and prevent it from changing its colour and staining the texture of the tooth. This is the greatest objection to the use of amalgam, and thus far I have not been able to learn that any composition of this kind has been made which is not liable to this objection. The article introduced by the Crawcours, I believe was nothing but silver precipitated from solution in nitric acid and mixed with fluid mercury. This is the way it is most frequently mixed, and when the materials are perfectly pure, is, perhaps, the best. If the materials are thoroughly ground together, and if the mass retains enough mercury after the excess has been expressed from it, to render it perfectly plastic, a dense, compact filling may be made of it, which will be wholly impermiab<sup>le</sup> to the fluids of the mouth,\* and effectually prevent the further decay of the tooth; but when mixed in this way it does not become as hard as some desire.

By using silver filings instead of precipitated silver, a much harder filling may be made, but it will not be so fine, as the grains of silver seem to be only cemented together by the mercury at their points, leaving the mass so porous, if the filings are coarse, as to admit the fluids of the mouth to every part of it. To prevent this, many com-

\* Prof. Westcott, in his "Report on Mineral Paste" says, "After preparing a quantity of amalgam very carefully, I filled with it a strong glass tube, making it as compact as possible, and then suffered it to congeal undisturbed, after which I immersed it in a tincture of red saunders. In a very few hours the colored fluid penetrated entirely around it, absolutely hiding the cement from view." The same happened with a tooth containing a large cement filling, immersed in the same fluid. I have tried these experiments in the following manner. Taking short pieces of glass tubes, I carefully inserted amalgam fillings in one end of them, from an eighth to a quarter of an inch, and without waiting for the amalgam to harden, I immediately filled the remaining portion of the tubes with the same tincture, thus submitting it to the pressure of a column of the fluid, at least one inch in height. The followi<sup>ng</sup> was the result:—In that containing a filling made of the filings of silver, the fluid penetrated around the stopping, but not so completely but what a large portion of the filling could be seen through the sides of the glass. On breaking open the plug, after several days, the interior portions were also found to be discolored. In another made from the precipitated silver, the fluid did not penetrate between the filling and glass, except in a few minute points, for a very short distance. In others made with precipitated silver and a small proportion of tin foil, gold amalgam, and zinc amalgam, the fluid did not show itself in the least below the upper surface of the plug, after remaining a week or more, during which time the alcohol entirely evaporated. In teeth filled with amalgam I found that the tincture of red saunders penetrated through every part of the dentine and enamel, after being immersed a short time in it, but much sooner in those which had been dried before filling, than in those which were filled immediately after extracting them.

bine the two preparations of silver, using the filings and the precipitated powder, and some rub in with the filing a small proportion of tin foil. Either of these compounds will make a fine solid filling, which will be completely impermiabie to the fluids of the mouth, if inserted with care.

A very hard filling may be made by combining a small proportion of platina with the silver before mixing it with the mercury. The platina and silver are melted together, the silver acting as a flux upon the platina, (which must be previously rolled into thin sheets,) causes it to fuse at a moderate heat. When the alloy is reduced to a powder by filing, it readily unites with mercury, and when solidified becomes as hard as steel. This filling was introduced into practice a few years since by Dr. Ware, and for a time it was thought to be a great improvement upon the more simple mixture of silver and mercury; but it was soon found that it changed its colors much sooner, and became much darker in the mouth than pure silver, and was much harder to remove from the tooth; for these reasons it has been almost entirely abandoned.

A spurious kind of amalgam, composed of mercury and copper, has been used to some extent by the dentists of New York and vicinity. The process by which the two metals are made to combine is unknown to me. It is generally condemned on account of the dark appearance which it soon assumes, as well as the poisonous nature of both of the metals which enter into its combination. When prepared for use it is hard, but by slightly warming it over a spirit lamp, it soon becomes quite soft, and as completely plastic as clay or putty. It makes a very perfect filling when placed in a hollow tooth, but for the above reasons I believe it is now entirely abandoned.

The filings of zinc also combine with mercury, and form a very fine grained paste; but this metal is so impure that much of it becomes changed to a black powder (probably an oxide) while rubbing them together before they become fairly amalgamated. This black substance may be washed out with water or alcohol, while triturating it in a wedgewood mortar. The affinity between zinc and mercury is not so strong as it is between silver and mercury; for this reason the former metals do not so readily unite, the compound is more readily decomposed, does not become so hard, and changes its color in the tooth much sooner. For these reasons it is much inferior to an amalgam of silver, and should never be used.

Some dentists have been foolish enough to fill teeth with tin amalgam, a substance which is extremely fine grained and very plastic, but does not harden, and is therefore no better than beeswax or putty.

Professor Tomes recommends palladium amalgam as much superior to silver (see Dental Recorder, Vov. 3, page 83.) I have never tried this article, and cannot therefore speak of the comparative merits of the two.

After testing all the above amalgams, I give the preference to the

silver amalgam when properly prepared. Much of the precipitated silver sold for this purpose is wholly unfit for use. Most of it contains portions of the nitrate of silver, which gives it an earthy appearance, having hardly any of the metallic lustre which it should always possess. The nitrate of silver, it is well known, forms the basis of indellible ink, and it is this substance which so soon gives that black color to many teeth filled with amalgam. Another reason why some amalgam fillings so soon change in the mouth, is the impure quality of the mercury, most of the quicksilver of commerce being more or less adulterated with lead and other base metals; yet it must be admitted that fillings of this kind are very differently affected in different mouths. I have seen some in which amalgam fillings will remain for years, very nearly as white as when inserted, while in others it never becomes darker than of an iron grey, in others, again, the same material will become almost as black as ink. In the some mouth, also, I have seen amalgam fillings put in at different times, by different operators, the color of which varied very much, showing a difference in the material. The following, I believe, is the best method of preparing amalgam for filling teeth:—Pure silver rolled into thin sheets should be dissolved in nitric acid diluted, if the acid of commerce be used, by its own quantity of boiling water. When all the silver is taken up, the solution should be diluted by adding ten or twelve times as much water. It is then to be precipitated in a dark room, by a clean bright sheet of copper, which should remain in the solution no longer than is necessary to throw down all the silver; the acid is then carefully poured off, and the deposit washed with boiling water. This washing should be repeated at least half a dozen times, in order to remove every particle of the nitrate from the precipitate. When thoroughly washed it should be dried in a dark oven. If carefully prepared in this way, it will possess the white shining brilliancy of silver filings; but if exposed to the light while mixed with any portions of nitric acid, it will be more or less blackened.

When required for use, it should be well rubbed in a wedgwood or glass mortar, with an excess of chemically pure mercury, (that prepared for the daguerreotypists is very good,) washing it at the same time in water or alcohol. When thoroughly mixed, it is to be put into a chamois skin and moderately pressed between the thumb and finger, to expell the excess of mercury. Some operators express from the mass as much mercury as possible, leaving the paste as dry as it can be made. When treated in this way, it undoubtedly makes a harder filling, but it is more porous than when a larger proportion of the mercury remains in combination with the silver; \* does not retain its colors so well, and is more apt to crumble to pieces while

\*If a small proportion of tin foil be added, it will render the paste more plastic, and fill all the pores between the silver; but I have not tested it sufficiently to ascertain whether the color remains as good as when only silver and mercury are used. It is worthy of trial.

using it, which makes it exceedingly difficult to put it into concealed, out of the way cavities. If the silver is properly prepared, the paste will become sufficiently hard when mercury enough remains in it to make it tenacious and plastic, in which state it readily takes the form of the cavity and fills the minutest points and corners.

*Preparation of the Cavity.* — Every dentist who has used amalgam for filling teeth, must be aware of the importance of thoroughly preparing a cavity before inserting the filling, if he would make the operation successful in arresting the subsequent decay of the tooth. Professor Tomes, in his lecture upon the filling of teeth says, "Before leaving the subject let me warn you that unless the cavity be well prepared, by the total removal of the softened dentine from the walls, and by getting a good, firm, and well shaped orifice, free from acute angles, no plug will answer, and least of all, amalgam. It will fall out, or become loose within twelve or eighteen months, and frequently in much less time, and decay will proceed." In every step of the operation the same care should be observed, as though gold or tinfoil were to be used, instead of amalgam, and if so, success will be quite as certain in all cases in which it should ever be used.

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## REPORT ON PRACTICAL DENTISTRY

*(Continued from page 187.)*

"In the department of mechanical dentistry," Dr. Cone says, "the improvements have been constant and rapid. In that division known as pivoting an artificial crown on a natural fang, there has been as marked a change in the practice of the profession as in any of its departments." What those improvements are the Report does not say, except that it notices the pivot guage, and a cement composed of gutta percha to place between the crown and fang, which have been brought to the notice of the reporter by Mr. G. F. Colburn of Newark, N. J. The pivot guage we have used for nearly four years whenever we have inserted teeth in this way with hickory pivots. It is an excellent article for condensing the wood before inserting it in the tooth, and should be in the office of every practicing dentist; but the cement is of little use, in our opinion, when the crown is well adapted to the fang — when it is not, it soon works out. The plan of inserting common plate teeth by means of gold backs and gold pivots, described in Vol. 1st of the Dental Recorder, and the improvement more recently made by Mr. F. H. Clark of this city, are not noticed in this Report. The experience of several years has convinced us of the great superiority of plate teeth, set upon fangs, by means of large gold pivots, over the common pivot teeth fastened with hickory dowels. They are much less in the way of the inferior teeth when the jaws are closed, stand much firmer in the fang, and last much longer. All

within our circle of acquaintance who have tried this method give it the preference over the old one.

In reference to the operation of pivoting teeth, Dr. Cone remarks, "At best the operation is only a temporary one, as the fang, sooner or later, becomes offensive, and acts as an irritant to the surrounding parts, the fang having taken on some one of the forms of disease named, when considering the destruction of the nervous pulp, preparatory to filling the fang of a tooth." This is undoubtedly true, and it may also be said that every operation for the replacement of the teeth "is only a temporary one." until we come to insert a full artificial set; and too many of these also prove to be *only temporary* from the very inefficient manner in which they are constructed. The operation is none the less important, however, on this account, as the natural teeth, to which we must fasten, when the fang is removed, are preserved in a healthy condition, just as much longer as the fang can be made to sustain the artificial crown. When the root can no longer be depended on, it is extracted, and the plate, sustained by clasps around two of the remaining teeth, is substituted. When these give way, as they are sure to do, after a term of years, the plate is extended to two more, and so on, until there are no more left. This is the history of the decay and loss of almost every set of teeth. Now we consider it of the utmost importance, in most cases, to retain the fangs, which support artificial teeth, especially in the mouths of young patients, just as long as they can be made to hold artificial crowns. What, in comparison to the gradual decomposition and loss of healthy bicuspides and molares, is the temporary inflammation which often occurs or the small, but permanent, fistulous ulcers which exist about the fangs of the incisores? These ulcers seldom give rise to any difficulty when the gums are kept in a healthy state by the free use of the tooth-brush, assisted by proper astringent washes. We have known them to exist for a long time, without the person in whose mouth they were being even aware of their presence. They are unpleasant, it is true, and so is an artificial tooth; but it is always with great hesitation that we extract, on this account, the fang of a front tooth to replace it by an artificial one on a gold plate. Dr. Cone seems to have a fastidious aversion to the slightest form of disease about the fangs of the teeth, and we must confess that it is by no means pleasant; but unfortunately we are often compelled to choose between two evils, and it is upon this principle that we often advise our patients to retain their natural teeth and fangs as long as they remain tolerably comfortable in the mouth.

Upon the subject of taking impressions we find nothing particularly interesting or instructive. The double rim on the wax-holder introduced by Mr. Colburn is noticed, and the material of gutta percha is recommended to be used in some cases instead of wax. We are satisfied that those who have not tried these articles will never do so but once. The spiral spring described in the October number of the Dental Recorder, as the invention of Dr. W. Riley of Columbus, Ohio,

is noticed as the improvement of Dr. Hullihen of Wheeling. Whether the credit of this invention or improvement be due to either of these gentlemen or to some half a dozen others who have claimed it, we will not pretend to decide.

Upon the subject of the "patent cavity plates" which have recently been introduced, the Report has the following sensible remarks in which we fully concur:—

"To this method of retaining plates there are some weighty objections. When the operation is proposed on young subjects, or when a predisposition to inflammation is developed in the patient, or the construction of the plate is such as to institute congestion of the vessels of the soft tissue, where the edge of the plate meets the roof of the palatine arch; a pathological change is liable to be instituted; and if the irritating cause be long continued, a fungous growth may fill the vacuum or chamber intervening between the plate and palatine vault, from a long continued vascular injection of the parts; giving rise not only to a troublesome local disease, but destroys the adhesion of the plate to the parts, and renders the piece of dental mechanism useless.

"The report, then, would offer the opinion, that on physiological and pathological grounds, the *indiscriminate use* of this method of inserting whole or parts of sets of artificial teeth is inadmissible in general practice. And that the most favorable cases for application of the principle are, where it is most demanded; namely, in entire upper sets, the patient advanced in age, when the soft tissues have lost the vascularity of early life, and the teeth have *long* been extracted, and the alveolar processes not subject to a further waste or change, and the parts indurated. And even when this principle is resorted to in favorable cases, it is important that preventive measures be resorted to, to prevent the objections that might follow the use of the principle, by relieving the vessels, by the use of friction daily with the finger on the soft parts covered by the plate."

The report contains a description of an artificial velum constructed by Dr. Hullihen, which we copy:—

"In the communication accompanying the model, Dr. Hullihen observes, 'In cases where the *velum has been destroyed* by mercury, syphilis or other causes; an artificial substitute may be required. Herewith I send you a model of one I constructed about twelve years since, which has answered a most excellent purpose. The peculiarities of this contrivance are, first, a valve made to fit the posterior opening of the nares; secondly, the attachment of this valve to a slider, by which the patient is enabled to adjust the valve while in the mouth, in such a way as to admit through the nares just the quantity of air desired. Thirdly, the mounting of the valve on a spiral spring, which vibrates backwards and forwards, as the breath is inhaled or exhaled, thereby answering, to a great extent, the purpose of a velum.'"

It is a very difficult matter to describe without the aid of drawings, a fixture of this kind, and the above is far from being as full and clear as is desirable, but it may convey some idea to the mind of the reader of the manner in which the loss of the velum may, to a certain extent, be supplied by artificial means. Operations of this kind are not often required, but when they are, it is desirable that the dentist should possess all the knowledge which exists among the profession upon the subject. Much skill and care are required to adjust an apparatus of this kind, which will be of any assistance to the patient. In several cases in which we have seen it attempted, the result has been a failure; only in two cases has it afforded partial relief to the sufferers.

This is the first report which has emanated from the Committee appointed by the American Society of Dental Surgeons to report to the Society "the condition and progress of dental knowledge in America during the year of their service;" and considering the difficulties in the way of procuring information, and the great labor required to properly arrange the subjects, and describe the various changes and improvements which are constantly being made, giving credit to whom credit is due, and withholding it from ignorant pretenders, the society has reason to be well satisfied with it. One thing the reader will notice, which is, that the Committee (or more properly Dr. Cone, for all the labor appears to have been performed by him) has not confined its attention to the progress of the science of dentistry during the *past year*, but has given a history of the progress of the science for the last eight or ten years, and that this report presents a view of the present condition of the profession in this country, and more particularly as it has been, and still is, connected with the society from which it emanated. The members of the society have received a large share of all the praise which the committee has had to bestow, while to those dentists who are out of its pale, it has been meted out very sparingly. More than twenty pages of the report are devoted to a history of the origin and proceedings of this society, while others of a similar character, having the same object in view, which have sprung up in various parts of the country, have not received a passing notice. The same may be said of the periodicals devoted to the diffusion of dental knowledge among the profession. This is a harmless piece of vanity which we can afford to overlook and excuse, considering that the society does really contain a few very skillful and scientific men, who have done much to advance the respectability and usefulness of our profession. We should feel more pride in the reputation of these men if they had not committed one act of fanaticism which must for ever remain as a reproach upon their otherwise fair fame.

The report concludes with the assurance that, if empiricism has not received its death-blow from "the battle-axe of science and industry," its shield has been sadly bruised and battered, so that the world is beginning to discover that in reality it is nothing but *brass* which

cannot much longer withstand the attack that has been made upon it. This is glory enough for one year. In the next report we hope to hear that the good work is still progressing.

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### LETTER FROM DR. DUELL.

Amsterdam, May 3, 1849.

MR. EDITOR, —

I take this opportunity through your Recorder, to caution others against the too careless manner of burning alcohol for soldering and other purposes. Although I was aware of the danger incurred by not having the wick large enough to completely fill the tube of the lamp, yet, in using it several years, I had become less cautious, and the wick not occupying the whole of the orrifice, the fire communicated with the inside of the lamp, and caused an explosion, forcibly expelling the cork from the top of the lamp, and forcing the wick out of the tube, together with about half a pint of alcohol on the floor, some three or four feet from the bench on which it stood. The tube being directed a little from me, I escaped by having a small quantity of the burning alcohol thrown in my face, and burning me in some half a dozen places rather severely, together with my hair and eyebrows which were pretty well singed. Had the tube pointed directly towards me, so that I had received the contents of the lamp in my face, I should have been severely injured, and should have considered myself fortunate in escaping without the loss of either of my eyes.

The danger lies in not having the wick large enough to fill the tube.

J. C. D.

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### ARRANGEMENT OF SETS AND PARTIAL SETS OF TEETH.

The following article from the Dental Register of the West, was written by Dr. W. H. Goddard, one of the editors of that periodical. Dr. G. is a practical man, and although the article presents nothing particularly striking or new, we publish it for the purpose of carrying out the original design of the Dental Recorder — to enable operators to compare their own practice with that of others, that from all the various methods of accomplishing the same end, the best may be selected. — ED. REC.

“Differing with some of the profession as to the best mode of constructing sets and parts of sets of artificial teeth, we have (at the solicitation of our professional friends, who have seen us work, and think the method we pursue easier than any they have witnessed, willing

also to contribute our mite to the common stock of dental knowledge, if we can in the least degree advance the interest of any, and in order to elicit the views of others) thought best to give a description of our mode, hoping it may induce some who have had more experience to give their opinions upon the subject. We are aware many dentists (eminent and respectable) are wedded to their particular practice, and think it cannot be excelled, and some are even unwilling to test any other, but adhere strictly to their own. We are not, however, among that number, believing some useful hints may be suggested, and knowledge imparted, by the most humble.

“What we are about to relate, upon the construction of artificial teeth, is fully understood and practised by many of our profession in this city and other parts of the Union. Some may pursue what they deem a better course, which we hope they will make known for the benefit of all.

“It is unnecessary to consume time in speaking of the initiatory steps to be taken in preparing the mouth for artificial teeth, presuming this is, or ought to be, fully understood by every person undertaking this branch of our profession; neither do we purpose speaking of the manner of taking impressions of the mouth, except so far as to give the material we use, the ingredients of which it is composed, and their proportions. This composition, which we think preferable to any now in use, not only for taking impressions of the mouth, but for adapting teeth upon a plate, it being, when slightly heated, very tenacious, adhering firmly to the plate, and retaining the teeth while in the mouth (if care be used to prevent its becoming wet by saliva where the back of the tooth comes in contact with it) sufficiently long for articulating purposes, is made of

|                     |   |   |   |   |            |
|---------------------|---|---|---|---|------------|
| Best Beeswax,       | - | - | - | - | 1 lb.      |
| Gum Mastic Optimus, | - | - | - | - | 1 ounce.   |
| Whiting,            | - | - | - | - | 1-2 ounce. |

Coloring it red, if wished, with alkanet root, bruised and tied in a piece of cotton cloth. The first two ingredients should be melted slowly, keeping it constantly stirred, adding the whiting last, incorporating it minutely; after being well mixed, remove from the fire; when partly cooled, add any perfume you please, and pour into common plates, when cold, warm the bottom of the plates, and remove the wax; if any sediment, it will be found at the lower side of the wax, which should be scraped off.

“When used for impressions, soften the wax in warm water; if required for retaining teeth upon a plate, soften by heat from an alcohol lamp or fire, adapting the teeth as nearly as possible before putting it into the mouth. We have used this composition for the above purposes twelve years; in the meantime, have tried many others which have been highly recommended, but have found none to surpass or equal it.

“It is not our intention to trace the work through all its different

stages, nor the method of making casts and counter casts — they are various, all leading to the same results ; are generally good, and familiar to every dentist ; but will suppose the plate swaged to its proper position, and ready to receive the clasps. It may not be amiss here to state, as there is much diversity of opinion as to the manner by which clasps should be made and attached to teeth, by some of our professional brethren, that we invariably prefer and use with clasps, believing them much less injurious to the teeth they surround, and far more beneficial than any other for the purpose to be accomplished, and cannot agree with the opinions expressed by some writers in the Dental Journal, that “the wide clasp is too unyielding,” and apt to destroy the vitality of the tooth by changing its position, thereby paralyzing the periosteum at the points of pressure, and destroying its circulation. We have almost daily instances where narrow (or half-round) clasps are used, of the injury effected by them, the partial or entire excision of the tooth. It is essential in all cases, when artificial teeth are applied, that there should be a perfect adaptation to the parts, the clasps accurately fitted to the teeth, and embrace, if possible, their whole circumference. In some cases, for instance, a single tooth, this is not necessary ; but we refer to a plate with many teeth upon it, and when attached to the molars.

The manner in which we adapt our clasps insures, in a great degree, a perfect fit ; if care be taken to trim our metal cast, the plan to correspond with the mouth, they seldom need any alteration ; our plan is by forming and swaging them upon the teeth of our metal cast ; we then add the plate and stamp it over them ; this brings all to an accurate fit ; we then change our work to our plaster model, binding the clasps and plate to their proper position by wire, and solder on our mould. This method we think far superior to that recommended by Dr. Brown, who advises “the clasps to be attached by wax, then lifted from the model, laid upon paper, wax downwards, plaster poured over both plate and clasps ; when set, dry and solder.”

The advantages of the plan we suggest (and presume there are scores of the profession who pursue it) are, the correctness by which the clasps are attached, the facility and accuracy by which it is accomplished. The whole can be soldered in less time than it requires the plaster to set in Dr. Brown’s plan ; and most certainly, if your model be correct, and your plate and clasps fit, it must also fit the mouth. It is true we destroy the plaster model if this course is pursued, which may be an objection to some — to us it is none ; we always take two impressions of the mouth, and two plaster casts. Our plate being partially finished, by filing, &c., we next adapt, as nearly as possible, the teeth before our patient arrives ; then, trying the plate in the mouth and adjusting it, remove and adapt the teeth, already selected and fitted, by means of wax or cement, to the plate, arranging the articulation, &c. ; remove the whole from the mouth, and place it in a copper saucer, plate downwards, the saucer having been previously half-filled with plaster and sand of consistence of cream ; it

will imbed itself in the plastering; immediately fill the saucers with plaster and sand, mixed, and let it partially set; before becoming hard, remove the plaster sufficiently to expose the wax, and when perfectly set, remove the wax, and the backs of the teeth are visible. Be particular and not remove entirely the plaster from the top of the teeth; it is required to retain them in their place, and prevent them from rising when heated, or when foil is forced under them. We are now ready to put on our studs or lining straps, which we do without removing the tooth from the plaster, fit the end of the strap to the plate, and by placing a very thin coating of wax upon its back, press against the pins; the wax will show the indentation made by the pins, and the places and positions where to punch the holes; this being done, countersink the holes slightly, file your back as you wish, replace upon the tooth, place your saucer upon a leaden slate on its side, and lightly rivet, cutting off, however, any superfluous pin before riveting. Your teeth are firmly and securely imbedded in a hard substance, equally surrounded upon all sides, and are in no danger of breaking by slightly riveting. After having completed lining your teeth, file the heads of the pins down smoothly, which can be as easily done as if they were already soldered, they are so securely fixed. This plan is much better than the one recommended by Dr. Brown, of removing the tooth and backing it: we never remove a tooth; and if, by accident, one becomes loose, it is a source of trouble to us. Borax your work well; place on your solder, filling up any interstices which may happen with goldfoil, and place in your oven. We endeavor to complete all plate-work thus far by night, letting it remain in the oven until morning, at which time it is thoroughly dry; place then upon a charcoal fire in our furnace; in half an hour, or less time, if in haste, the work is heated to redness; removing it then into a copper holder, fitted for receiving the saucer; place under the blow-pipe, and in half a minute all is soldered in a perfect manner; cover immediately the saucer with a larger one; if block work, fill the saucer with pulverized charcoal first, then cover with a large one and let it cool. We seldom crack a tooth, or block work, and the whole resembles a casting.\*

‘These remarks have been hastily penned, not so much to instruct (for they may be generally understood by all) as for the purpose of inducing suggestions of any better method of accomplishing the desired end. Many of the profession, I am aware, pursue a different plan, and several I know have tried other methods, who now give this a decided preference, and think it far superior to any other, in point of safety to the work, economy in time, and facility to the dentist.’

\* We would remark, the furnace and blow-pipe in use is one constructed by our friend Dr. R. Somerby, of Louisville, Ky., and is one of the most complete instruments for dental purposes we have ever seen, and should be in the laboratory of every scientific dentist. A full description of it can be seen in the second number of the fifth volume of the Dental Journal.

## PIVOT TEETH.

In the Dental Register we find the following appended to the article, from the Recorder, describing Mr. F. H. Clark's method of inserting pivot teeth. It is from the pen of Dr. James Taylor, the Cincinnati editor:—

“The above differs essentially so little from the plan recommended by us in our lectures to the dental class, that we give it in connection with the above.

‘In pivoting teeth when the roots are not perfectly sound, and the gums show no particular indication of disease, the ordinary method of inserting with wood, or wood and wire through its centre, will not hold the teeth with that firmness which is requisite, nor prevent the roots from that rapid softness which is so often met with, and which renders these teeth so useless. To obviate this difficulty and preserve the roots, as well as render these teeth more secure, we formerly were in the habit of first inserting our pivot into the cavity in the fang, then plugging compactly around this with foil, leaving the wood slightly enlarged at the end, so as to, in part at least, retain this filling. Then adjust the tooth, sometimes making the wood and foil to merely plug up the root, leaving the base, on which the artificial tooth sets, smooth and solid, representing a healthy, sound root, with a hole pierced through the centre of the wood, to represent the dental foramen, and into this force a metallic pivot, which has been adjusted to an artificial crown. The necessity, however, of at times leaving an outlet for the escape of matter, and which was not very easily done when this plan was adopted, led us to an improvement which we consider far preferable. This consists in the formation of a gold tube or cylinder, the length of which you desire your pivot. The chamber of this tube is divided by a plate of the same material, first soldered to its place before the tube is closed, and which, however, should not divide the tube in the centre, but leave on one side a space twice as large as on the other. The large space is for the reception of the pivot, the smaller for the escape of matter. On one end of this tube is soldered a head or phlange—this is for the better retention of the gold filling, which is to be introduced after the insertion of the tube. On the other end of this cylinder is cut a screw—this is made of the proper size to suit the cavity already formed in the fang, and which has been threaded or cut with a screw for the reception of your tube. This should be inserted in such a manner that the smaller opening in your cylinder should be at the palatal side of the fang, and before the insertion

of your tooth, care should be taken to see that the dental foramen is open to the apex of the fang, and has access to the smaller opening through which the matter is to pass; from this opening in the tube, to the palatal edge of the fang, a small groove is cut, which carries the matter into the mouth. The decayed portion of the root having been removed, and when admissible, one or two circular grooves cut in the flaring portion of the cavity, the tube is screwed in, and a solid compact plugging of gold made to fill up the entire root not filled by the tube; after which the base is leveled with a file, and your tooth, which is prepared, with a metallic pivot, (which is accurately adapted to the larger opening of the cylinder,) is then inserted—this may be so adjusted as that it can be removed or not as may seem best.

“This method, so well adapted for these cases, has also led me to adopt the same, or nearly the same, where it is not necessary to leave an opening for egress of matter. In the latter case making the tube without the partition, and generally some smaller than when two openings are necessary. After or before the tube is screwed into the root, enlarge the dental foramen some distance up the same size of the cavity in the tube, and then make the pivot long enough to pierce this as far as possible, thus securing a firm and sound tooth. In the latter operation, the tube is inserted, and made as in the former, excepting that there is no partition in its cavity, and the pivot may pass entirely through this into the dental foremen.’

“These remarks, taken from our lecture to the class, will give, as we think, a tolerable idea of our plan; and we would here remark, that we have on several occasions used these tubes for the insertion of plate teeth, in one instance using two good roots for the retention of seven teeth. The plate is very narrow, made double, is removed every day, cleansed and replaced, by the lady who wears them, and has been in use now three to four years, and, we must say, look as well and subserve as good a purpose as the same number of teeth ever inserted by us either before or since. The roots appear to be still sound and healthy, and we are sure the lady would not part with them for any teeth that might be clasped to her other teeth, which are quite good. We wish, however, not to be understood as recommending the general adoption of this plan; for we know that is generally not only advisable, but necessary, to remove these roots from the mouth; and so it is the case with those roots which have abscesses formed at their apex. It shows, however, the resort of the profession, and, as we believe, sometimes justifiable, because inflicting on our patient a lesser evil than the adaptation of clasps to teeth; the mouth should, however, always be properly pre-

pared and put in a healthy condition. We hold that no mouth in a diseased condition is fit for the reception of artificial teeth, and are not at all surprised at seeing so many pivot teeth fail in two or three years; it is only a matter of astonishment that they can often be worn at all. The gums are often spongy and inflamed when these teeth are inserted; many decayed teeth and roots are suffered to remain in the mouth, which, of themselves, cause continued suffering. In this condition of things, artificial teeth only increase the general irritation."

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### ON A NEW AMALGAM FOR THE TEETH.

The following articles are taken from the London Lancet, and that our readers may have every thing new, connected with the practice of Dental Surgery, we publish them, "the bane and antidote," before testing the properties of the new mixture for filling teeth. It will be seen that the amalgam controversy is not confined to our own country, and that the arguments made use of in England against it are about the same as in America. No new light is thrown upon the subject by Mr. Levison, who is in such a hurry to condemn the new amalgam, that he cannot wait to test its qualities. It strikes us that it will be well for those who are opposed to the use of amalgams to try this new one before condemning it, for if, as Mr. Evans says, "it retains its color perfectly, neither oxidizing on the external surface, nor on that applied to the cavity;" the objection that it may produce salivation would appear to have but little force, as it is generally contended that ptyalism can only be produced by amalgam fillings, in consequence of the oxid which is formed being taken up by the absorbents:—

"To the Editor of the Lancet.

"SIR,—I shall be obliged if you will allow me, through the medium of your journal, to make known to my professional brethren the composition of an amalgam invented by myself some years ago, which I have used with much success for a length of time, in some peculiar cases, and have experimented with it extensively in filling carious teeth. It is composed of chemically pure tin, prepared with much care, to insure its being free from any other metallic substance, and combined with prepared cadmium, in small quantities, and mercury. In using it, more or

less mercury should be employed, as may be required to make it more or less plastic.

"The cavity of the tooth being previously thoroughly freed from carious matter, can be carefully filled with the paste thus formed. In the course of a few minutes it hardens into a solid, and gradually acquires a still firmer consistency and toughness, exhibiting a whitish color, or, if cut or burnished, a metallic lustre, like that of pure tin.

"The advantages of this filling, I believe, are such as are possessed by no other amalgam. It retains its color perfectly, neither oxidizing on the external surface, nor on that applied to the cavity, and of course it does not discolor the tooth itself. It fills each crevice of the cavity, and, effectually excluding moisture, and all kinds of deleterious matters, prevents the recurrence of caries; and becomes sufficiently hard to withstand the friction of mastication. To these most important advantages may be added others—*e. g.*, it is easily and quickly prepared, without the trouble of heating it, as is the case with some of the amalgams hitherto used. It is readily applied to the cavity of the teeth, and without the disagreeable creaking sound which attends the employment of other preparations. It will not amalgamate with, or injure any gold clasps or plate bearing artificial teeth, which may be placed in contact with it; and in case of its removal being necessary, it can be cut out as easily as a good filling, as it forms a tough, almost ductile substance, and not a hard, brittle one, like the ordinary amalgams.

"I have submitted it to the inspection and trial of some of the best dentists here and in London. As far as their opportunities of investigating it have hitherto extended, I think they fully agree with me as to its advantages. It is, I believe, the best filling hitherto used, in those cases where amalgams are thought to be useful; and some of my friends are willing to award it even higher praise than this.

"Believing it, therefore, to be a useful discovery, I wish to place it in the hands of the profession, and I make this communication to you, at the same time that I publish a similar one in France, and in my native country, America, where I first used it.

I am, Sir your obedient servant,  
THOMAS W. EVANS, Dentist."

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#### REMARKS ON MR. EVAN'S NEW AMALGAM.

"To the Editor of the Lancet.

SIR,—In the last Lancet there is a communication entitled 'A New Amalgam for the Teeth,' by Mr. Evans, of Paris. The

author says, 'It is composed of chemically pure tin, prepared with much care, to insure its being free from any metallic substance, and combined with prepared cadmium, in small quantities, and mercury.'

"The remarks which I feel bound to make on this new compound cannot be regarded as invidious or personal, as some years since I called the attention of the profession to the injurious consequences arising from the use of amalgams and alloys for filling carious teeth. These compounds were shown to induce certain galvanic phenomena, and by rendering the saliva acidified, had a tendency ultimately to destroy the teeth. Every tyro in chemistry is aware that acids act chemically on the lime of teeth, which is the hardening and conservative portion of the enamel and dentine, and that if it is removed from time to time, however gradual the action may be, the ultimate tendency must be injurious, the injury being a certain consequence of exposing the pulp cavity. Sometimes when the teeth are large and strong, and the general health good, the evil may not be experienced for some years, yet, in every case where amalgams are used, there is induced a sensitiveness in the teeth, under the sudden changes of temperature, whether from cold or hot things taken in the mouth, or from the vicissitudes of the atmosphere. The amalgams hitherto in use are made with pure metals—e. g., gold or silver, or tin, and yet whenever they are combined with crude mercury, they all oxydize more or less. In some mouths where there exists a strumous habit, or in dyspeptic complaints, this action takes place very rapidly. I cannot, therefore, consider that Mr. Evan's amalgam will be an exception to this rule. For he tells us, 'In using it, (the new amalgam,) more or less mercury should be employed, as may be required to make it more or less plastic.'

"In some persons there is an idiosyncrasy to be soon effected with mercury, so that there are many cases on record that the use of amalgams often induces ptyalism. It cannot be the gold, or the silver, or the tin, to which these effects can be attributed, but only to the mercury combined with these pure metals.

"I am induced to cite one fact related to me by one of the most eminent professors of the Queen's College, Birmingham. He said 'that he had an upper molar tooth stopped with amalgam, and in the lower jaw a molar stopped with gold. As these two teeth came in direct contact when the jaw was closed, he felt a perceptible galvanic action, and that if they could have been seen when such was the case, he had not the slightest doubt but that a spark would have been visible. Ultimately, the agony was so great in the tooth stopped with the amalgam, that he was obliged to have it extracted.'

"J. L. LEVISON."

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## NEW YORK DENTAL RECORDER.

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JUNE 1, 1849.

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### DR. MAYNARD'S METHOD OF FILLING FANGS.

Since the publication of our last number, containing Dr. Cone's description of Dr. Maynard's instruments for filling the fangs of teeth, from which the nerves have been extracted, we have received a letter from this gentleman, containing specimens of instruments such as he uses for filling the smallest canals in the fangs, also several strips of gold prepared for this purpose. Dr. Cone says, "heavy numbers of foil should be used, by being prepared so as to enter the canal on the point of an elastic plugger, with slight irregular projections presenting themselves from the side of the instrument, for the purpose of conveying the gold up the cavity of the fang of the tooth." It is evident that such an instrument is much better adapted to extract any substance from the fang than for filling it with delicate strips of foil, which would, unavoidably, stick to these "irregular projections," and be withdrawn with the instrument.

Although Dr. Maynard's note was not intended for publication, we cannot better describe the instruments than in his own language. He says, "An instrument with delicate *barbs* cut on its side or sides, I *do* use for removing dead pulp or other matter from the fangs, but the plugging instruments, as you will perceive, are perfectly smooth. I inclose, also, a sample of gold foil, such as I fill fangs with, *if* the canal be very small. You will find a few strips ready for use, already cut off. This gold was manufactured in St. Petersburg,—probably from Siberian gold—and is about what would be called here No. 32. I have heard my fang instrument described as being made of watch main-spring. I have one such, only, never had but this one, and this not a plugger. All my fang-pluggers are made of steel wire, with no other temper than such as it has when purchased, and what little it gets by burnishing after the instrument has received its proper shape."

Dr. Maynard also complains that misrepresentations have been made respecting the intended use of other instruments which he has constructed, as, for instance, that his drill stock was intended for *breaking down* the enamel to get into a cavity—a piece of barbarity of which he entirely disapproves. Also that one beak of his forceps, for extracting fangs, is intended to penetrate the alveolus; he says, "I make no such use of it, nor ever intend to."

The forceps alluded to, if we are rightly informed, have one beak terminated in a hollow groove to fit the convexity of a fang, and the other in a slender curved point, intended to pass high up between the two external fangs of superior molares, for which they are mainly designed. We should think the instrument a very convenient one in many cases. The above corrections are made in accordance with the wish of Dr. Maynard, who has always, we believe, extended the utmost liberality to other dentists, in the way of professional intercourse.

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### ANNUAL TABULAR SHEET OF THE AMERICAN SOCIETY OF DENTAL SURGEONS.

At the last annual meeting of this society a resolution was passed requesting each member to record a synopsis of all the operations which he may have performed during the year, on blank tables prepared by Dr. C. O. Cone for this purpose, and return the same to him by the first day of May next following, that the whole may be analysed and submitted to the society for its inspection at the annual meeting in August.

The object of these tables is to collect correct statistical information respecting the different diseases of the teeth, and the operations performed upon them; as, for instance, the number of fillings in each kind of teeth, the surfaces on which the operations were performed, age, sex, and temperament of the patient, physical characteristics of the teeth, &c., &c. Much of this information is more curious and interesting than it is instructive and important in practice, nevertheless we should be glad to see the system carried out; but we doubt if it will be to a sufficient extent to answer any useful purpose. It imposes quite a tax upon the operator, one which requires great care and nice judgment and investigation. Besides, if we understand the plan proposed by this sheet, it compels each dentist to "show his hand," in other words, to expose his entire business to the society, so that each member, knowing the fees of any other member, can tell exactly what his income has been during the year. What will those dentists do who boast of being so driven with business from morning to night, and yet cannot raise money enough to pay for the materials they use. We should like to see the tabular sheet (or rather sheets, for one would not hold the half,) containing the operations of some of our acquaintances. Dr. Cone would require all the clerks in the General Post Office to analyse the whole in the brief space of time allotted to him, between the first of May and August.

But seriously, there are but few who would care to expose their business in this way, and for this reason, if for no other, we

think the plan will not succeed to any extent. As we have Dr. Cone's permission to speak of his plan, either to censure or praise, as in our opinion it most deserves, which we certainly should do without his permission, if we noticed it at all. We shall take more time to examine his tables, and recur to the subject again at a future time.

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### ANTIQUITY OF ANÆSTHETIC AGENTS.

A recent number of the London Medical Gazette states that Mr. Stanislaus Julien makes the following statement. A Chinese surgeon upwards of two hundred years before our era, had employed the canabis Indici to produce a state of insensibility before performing surgical operations. This curious affair is extracted from a Chinese system of medicine, entitled *Kou-kin-i-long*, which was published in the sixteenth century. From the representations of the delightful reveries which the patient experiences while under the influence of that drug; some of them being recent, and from highly respectable sources, we are led to hope that some one may commence a course of experimental observations upon the effects of the Indian hemp, with reference to its anæsthetic properties.

The Boston Medical and Surgical Journal states that in New England it has been found to be nearly or quite powerless, and adds that the want of success may possibly be in consequence of the timidity of practitioners inducing them to prescribe doses not of sufficient potency. From various sources abroad, the impression has become extensively diffused, that the canabis Indici exerts a powerful control over the nervous system, which might be readily confirmed or removed. Here is ground for investigation.

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### AMERICAN MEDICAL ASSOCIATION.

This Association met at Boston on Tuesday, May the 1st. Dr. John C. Warren was elected president. There were over 250 delegates present from almost every state in the Union. We learn that the delegates from the Baltimore College of Dental Surgery and the American Society of Dental Surgeons were admitted and took part in the proceedings of the Association. This is a high compliment to the dental department of the medical faculty, and conveys a just rebuke to the exclusiveness of the New York Academy of Medicine, which recently refused, by vote, to admit dentists to membership, who were regularly educated physicians and surgeons.

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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Vol. III.

JULY 1, 1849.

No. 9.<sup>10</sup>

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*New Hampshire, June 18, 1849.*

DR. ALLEN,

Dear Sir—Wishing a little advice, I have ventured to solicit it of you, which if granted will be thankfully received. I would like to be informed if it would be advisable in inserting an entire denture when the lower jaw protrudes so much as to strike outside the upper, to have the teeth so arranged as to cause the upper to strike outside the lower, or would it be advisable, and would they do as well to have the upper set shut inside the lower.

I would also like to be informed if inserting whole sets without employing spiral springs is practised to any great extent. I would also like to be informed if upper sets inserted on the atmospheric principle can be made to adhere with such force that they will not be liable to be triped up from the back part when using only the front teeth for mastication, as for instance, when the lower molars are wanting.

If you will give your opinion upon the above through the Recorder, you will undoubtedly do a favor to many besides

Your Subscriber,

J. W. R.

## REPLY TO THE ABOVE.

The letter which we publish above is from a dentist located in a remote part of a neighboring State where he has not the means of communicating frequently with many of his professional brethren. The points of practice which his questions refer to, have long been mooted among dentists and a difference of opinion still exists, upon some of them. The letter is creditable to our correspondent as it shows him to be a modest man and one possessing an enquiring mind, and instead of convicting him of ignorance, shows conclusively that he knows enough to comprehend and understand more than one way to do the same thing, which is more than some in our largest cities, who have the privilege of free communications with many of their brethren, can

be made to comprehend. There are some among us who may emphatically be called men of a single idea, and that idea is as fixed and irrevocable in their minds as the laws of the Medes and Persians. They stand committed, perhaps by hasty assertions based on false conclusions, or by education, or interest, or some other cause, to a certain course of practice, and all the light which can be poured into their minds will never change them, so they have lived and so they will die a monument of obstinacy, prejudice, and self-conceit. If the experience which we have had in cases of the kind here specified can assist our correspondent any he is welcome to it.

1. In reply to our correspondents first question, we may say, that much depends upon the degree of prominence which the lower teeth originally had over the upper. Where there was but a slight protusion of the chin, the inferior teeth closing just anterior to the superior, and where the absorption of the superior jaw has not been very great, there will be no difficulty in so adjusting the artificial teeth as to remove entirely the original deformity. We have had several cases of this kind in which there was no difficulty in arranging the teeth to articulate in the usual manner. In others where the disparity between the jaws was originally very great, we have been compelled to adjust the artificial teeth so that they may close as the natural ones had done. In these latter cases if an attempt be made to cause the lower teeth to close back of the upper, the inferior incisors must be placed so far back upon the jaw as to produce a disagreeable elongation of the chin which is considered no mark of beauty, while the superior incisors must be placed so far forward that when an attempt is made to bite with them, having no support in the jaw above, but standing far anterior to it, the plate rocks upwards in front and downwards on its back part, so that the front teeth are rendered almost entirely useless. In determining therefore which course of practice to adopt, the relative Prominence of the jaws, and the fullness of the alveolar processes and original contour of the face should all be taken into consideration.

It is also important in cases of this kind, if the dentist would save himself the trouble of subsequent alterations in the teeth, that he consult the patient and his friends, explaining all the circumstances, so that they may also fully comprehend, if possible, the subject before the teeth are completed.

Some time since a patient came to us for the purpose of having an

entire set of teeth, we explained the subject to her, telling her, that we could, without difficulty, so arrange the teeth as to remove entirely the prominence of the lower lip and give a corresponding one to the upper, which would, as we thought, improve (if that were possible) the expression of her face. The lady said that before deciding the matter she would consult her husband. She did so, and the result was that the husband did not wish his wife improved any, he preferred to have her look just as she always had done. The teeth were accordingly set as nearly in the position which the natural ones had occupied as possible and gave very good satisfaction; but as they were merely a temporary set, the gums and alveolar processes gradually absorbing, soon caused the face to shorten and the chin to protrude considerably, more than when first inserted. This the husband thought was too much of a good thing, and we were requested to place the inferior teeth farther back; this we did, at the same time bringing the superior incisors farther out and making them strike the ends of the interior. All now decided that this was an improvement upon the first and came to the conclusion, that when the permanent set are adjusted the superior teeth shall close anterior to the inferior.

2. The fact has been ascertained that entire double sets of teeth may be worn without the aid of spiral springs, and many dentists now seldom use them but rely wholly upon atmospheric pressure to retain the teeth in their position. There is however much difference in the tact which persons use in wearing teeth adjusted upon the suction principle, for while some have no difficulty in using them for mastication, others, when the case is apparently quite as favorable, cannot use them for common conversation, until they have become accustomed to them by the aid of springs. When a person has worn an old plate that was originally fastened by clasps to other teeth, until those teeth have decayed, broken away, or come out, he is well prepared to wear a plate sustained wholly by the aid of atmospheric pressure. In these cases, which are frequently met with, the new plate, if the fit is good, stays so much better than the old one did that no embarrassment is felt, but on the contrary the greatest satisfaction is generally experienced.

Our practice has generally been to construct the teeth in such a manner that they may be worn with or without springs. Where the springs can be dispensed with they are worn with much more satisfaction, as the springs often irritate the cheeks and become offensive

by collections of food between them and the teeth while eating; they are also more difficult to keep clean than any other part of the set, and liable to break at short notice. For these reasons we advise that they should be dispensed with whenever it is practicable to do so.

3. When all the lower teeth are gone except the incisors and cuspids, it is impossible to give any very reliable opinion as to the possibility of the patient being able to wear an upper set without first knowing the individual for whom they are to be inserted. There are many who cannot wear them, while others do, and at the same time say they can masticate their food with great satisfaction. Every practical man has found more difference in the ability of patients to manage well cases of this kind than he has in his luck in getting good fits, when adapting his plates to the mouth. A few years since a lady called at our office for a complete upper set of teeth, she had also lost all her lower except six in front. On examining her mouth we expressed doubts about her wearing them, for the reason specified by our correspondent. The lady, however, was very confident that there would be no trouble and we went on and completed the set. After they were finished and placed in the mouth and she had closed the lower ones upon them a few times, we asked her if she thought she could make them do. "Yes" said she, with a promptness which showed no small degree of energy of character, "I am determined they shall do," and they did do for we did not see our patient again for more than two years, when she stated, that she never had the least difficulty since the day they were put in the mouth.

Much assistance may be derived in some cases by the use of artificial teeth made with a shoulder for the lower teeth to strike against a short distance from the cutting edge of the teeth. If the alveolar process is not so much absorbed that the teeth have to be placed far anterior to it, there will be no difficulty when teeth having shoulders are used.

The dentist when consulted in cases of this kind should always give a very guarded prognosis unless he knows well the character of the patient and has reason to think that she will make them do good service at any rate.

Every practitioner must see many of the great variety of cases which occur before he is able to form a correct judgment in any particular one. It is practice which all require, and to the young dentist

we would say, *try* in every case that you can meet with, but be cautious and not promise too much. Oftentimes as much may be learned in a failure as in a successful attempt, and with the well practised and skilful dentist it may almost truly be said "there is no such word as *fail*."

ED. RECORDER.

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From the Dental News Letter.

## PLUGGING TEETH.

*Messrs. Jones, White & Co.*

GENTLEMEN:—I will now proceed to give a description of the instruments used in plugging teeth. But from the great variety of shapes and instruments used in plugging, it would seem that no two dentists could adapt themselves with facility to the use of precisely the same kind of instruments; and that each should consider his own best suited to all, is not unnatural. That every dentist should be capable of adapting instruments to suit his taste, and peculiar method of operating, is necessary, because the shape of the instrument will much depend upon the position which the operator assumes in operating, the construction of his chair and manner most easy of approaching the patient. Therefore, we do not wish to be understood as urging our own as best suited to all, but we will give a numeral description of some of them and in the order in which they should be applied in certain cases. Beginning first with those commonly used for plugging the front teeth on their approximal surfaces, and numbering them 1, 2, 3, &c., in order in which they are to be used; so that if they are applied in this manner by the learner, he will produce a certain inevitable result.

No. 1, is bent near its extremity to an angle of about eighty degrees, and is curved upon itself latterly, so as to form what are generally termed right and left pluggers. The curve should be sufficient to allow the point of the instrument to fall to the bottom of the cavity with facility, when rotating the shaft of the instrument on its axis, when entering and packing away the gold in the cavity, without the convex part of the instrument touching the adjacent tooth. There should be larger and smaller sizes, to suit the size of the division between the teeth and the cavities. These instruments can be used to advantage in many parts of the mouth.

No. 2, is bent to an angle of about eighty-five degrees, about one-fourth of an inch from its extremity, but is flat and straight with a kind of rib, or elevation running along the middle, which gives it the appearance of a flattened spear. But instead of it actually terminating in a spear point, it terminates flatly with an edge in the direction of the shaft of the instrument. This edge is slightly serrated to prevent it cutting the gold too much while packing.

No. 3, is bent at about the same angle as No. 1, and the one curved right and the other left, but instead of presenting a right and left flat surface, it presents an edge which is serrated, in order to better carry the gold into the cavity, and to require less force to produce the same effect upon the surface of the plug while packing, than a broader surface.

No. 4, is bent at an angle of about twenty degrees, more or less, to suit different cases, terminating nearly at an edge, which is also serrated. This instrument can be used for packing the gold along the lower boundaries of the cavities of the approximal surfaces of the superior front bicuspides, and some of the molares; but when bent at an angle of about eighty degrees, forming No. 5, it can be used for the inferior molars.

No. 6, is a strong, doubled-curved, flat, oval burnisher; each curve is at an angle of thirty degrees, and half an inch long; the last arm of the angle is slightly curved, so as to form a convex and concave surface laterally, making a right and left instrument; this instrument can be used with great facility upon the approximal surfaces of nearly all the superior teeth, as well as some of the inferior, by resting the thumb of the right hand against the tooth which is being plugged, or one adjacent.

All instruments for packing a plug should be wedge-shaped, so as to pack laterly as well as downwards,\* and presenting as small a surface to the plug as possible, so that the greatest effect may be produced upon a given surface with a given power. The variety of instruments for packing and burnishing plugs, can be obtained at the instrument makers, generally, and their adaptation to various positions and purposes, must depend partly upon the ingenuity and judgment of the operator.

#### MANNER OF PREPARING THE GOLD.

When the cavity is prepared, and the instruments intended to be used for introducing the plug, are placed within convenient reach, then prepare the gold in such a manner as may be deemed proper for the case; say for a small sized lateral cavity, No. 4 gold cut in strips, from one-fourth to one-half the breadth of the leaf—rolled, or folded and twisted to form a kind of rope, but not to be crimped so as to break the leaf in either way; on the contrary, it should present as smooth an appearance as possible. Some suppose, the more roughly the rope is twisted, the better one fold, when put in the cavity will hold upon another. But not so; besides, it makes a porous plug, and when the leaf is much crimped and broken, it cannot be rendered solid without immense pressure: again it will not receive a fine polish, as the small particles will constantly burnish off.

For facial cavities, No. 6 is, perhaps, best prepared in a similar manner as described above, as it makes a stronger plug, and there is

\* The writer believes he was the first to apply the sharp-wedged instrument for plugging teeth, having used them as early as 1838.

better opportunity for applying more pressure, in packing, in such cases. Where a facial cavity is large, a leaf of No. 4, folded over a piece of watch-spring or thin burnished steel, of about an eighth of an inch wide, in the form of a tape, which folded again upon itself so as to form a kind of block, as many of which as may be desired, may be placed into the bottom of the cavity and firmly packed. The gold being folded smoothly in this way, is already nearly as solid as it can well be made, and very little pressure is required to render it entirely so. A deep cavity partially filled, so as to make it shallow, is desirable, which can then be finished with the rope in the usual way. This kind of block, nicely folded, is indispensable and invaluable for building up the broken down sides of cavities, or placing along the gum of any large cavity, because the dampness cannot permeate it, as well as the gold rolled in the ordinary manner, and in filing and finishing, it will not crumble away. It should be our constant study to put the gold in such a condition before introducing it into the cavity, as to be rendered solid with the least possible pressure and in the shortest space of time. In introducing the gold into a shallow cavity, say a little deeper than the enamel, one end of the rope should be placed firmly against one side and bottom of the cavity opposite the point at which we intend to finish. Then catching the roll outside of the cavity, and folding it upon itself with the instrument, and carrying that point down to the bottom of the cavity, also, leaving a knuckle a little without the orifice. This continued alternately, and pushing the one fold against the other powerfully, until the cavity is filled, using for the last one or two fold a small instrument. This can commonly be accomplished in the cavities of the front teeth with No. 1 instrument. Now, these knuckles, or convolutions, may be projecting in the cavities of the approximal surfaces against the adjacent teeth, so as to prevent getting fairly upon them with the same instrument; if so, use No. 2, which, being sharp at the edge, and wedge-shaped, will enter between the plugs and the adjacent tooth, without displacing the gold from its previously fixed position, and compress the plug sufficiently to admit of applying the sharp right and left packers, No. 3, with which the plugs can be completely packed. The same method precisely, is adopted in introducing the gold into the facial cavities of the superior and inferior molars, using No. 4 for the superior, and No. 5, 2 and 3, as the case may be, for the inferior; and for packing down the lower jaw, use the ordinary packers for back teeth, with small points slightly serrated, to prevent slipping. Now it is exceedingly important that the gold and the cavity should be kept perfectly dry during all this part of the operation, and in front teeth especially, because the dampness will prevent the fresh dry surfaces of the gold and cavity from adhering well.

If the saliva gets in, it cannot be entirely pressed out, however powerful the pressure may be, because the hardening of the gold upon the surface of the plug, will close up the pores there and prevent the

water from escaping from those below ; besides it will undergo chemical change, and discolor the tooth and plug. Various contrivances have been resorted to by different operators for this purpose ; Desaborde's tongue holder, for depressing the tongue, and Lawrence's which is for a similar purpose, and very useful. Some also, use a kind of truss with one pad under the chin and one on the tongue. Even the syphon has been applied to draw the saliva from the mouth. A very simple contrivance of mine, whilst operating on the lower teeth, is to fold a piece of muslin around a light watchspring, about two and a half to three inches long, as the case may require, sufficient to make a roll about as thick as the little finger, and place it around the jaw between the tongue and the margin of the gum. This not only absorbs the saliva, but compresses the sublingual and maxillary ducts, and prevents its rapid secretion, and the elasticity of the spring forces the roll against the gum, and prevents the saliva from flowing between the teeth while operating upon their approximal surfaces, as well as any other parts of them. And as the back teeth of the inferior maxillary, commonly incline a little inwards, they favor the retention of it in position. If at the same time, a roll of cotton, lint, or napkin be placed between the cheek and the superior teeth, to absorb the saliva there as well as to compress the stenoion duct, and an additional roll compressed between the inferior teeth and cheek, a complete state of dryness can be maintained long enough to accomplish the operation of plugging any of the inferior teeth back or front. For protecting the back teeth of the superior maxillary, placing a roll of cotton, or muslin between the gum and cheek, is frequently sufficient, but when saliva comes in the way from the patient involuntarily touching it with the tongue, apply the tongue holder, or roll a napkin into a ball, and place it between the roof of the mouth and tongue. A plan which we practice a great deal in operating upon the front teeth—as it not only keeps the tongue down but prevents the breath from dampening the gold or cavity, at the same time that this is applied, for the front teeth—is to place a thin roll of muslin between the lip and gum. This will suffice for general direction, but each operator must exercise his judgment in adapting an expedient for special cases. For drying the cavity, some prefer lint, others cotton, paper, tape, &c. We use tape or cotton, as the case may be, forced in hard enough to absorb the principal part of the dampness, and depend upon scraping the cavity dry as that process leaves a fresh surface, to which the gold best adheres. After the gold is well packed\* in the cavities, file and scrape the rough surface of the plug, pack and burnish alternately with a smooth instrument, until the surface is level or flush with the margin of the cavity, always having filled the cavity full enough to admit of this without reducing it below the margin. Very frequently we do not file the tooth as much as we ultimately intend it shall be, that

\* We sometimes use for packing the buccal plugs, a forcep constructed for that purpose, specimens of which can be seen at Mr H. G Kerns, No. 293 Market street.

after the plug is packed we may file the tooth so as to be sure that the plug and margin of the cavity shall be perfectly flush, unless it be in some few cases where it is desirable to have the plug to project above the surface of the cavity, but in all cases, the marks of the instruments should be filed\* out of the surface of the plug. After this is accomplished, use between the front teeth, emory paper, or pumice, finely powdered, rotten-stone and rouge,† and burnishing alternately, until the surface is as perfect, and dense, and mirror-like as a well polished gold plate. It is indispensable that the surface of the plug shall be impervious to air and dampness, and not loose particles of gold by brushing or during mastication. The Scotch stone of the jewellers, can be used with advantage in many cases in dressing the surface of the plug, previously to the use of the rouge, but all those substances must be well cleaned off of the surface of the plug before using a burnisher as they will injure the instrument, and prevent the production of a perfect polish. For filling a nerveless tooth, we are in the habit of rolling a piece of heavy gold leaf into a solid and pointed roll, which can be done by cutting the leaf into a point and passing this down the roots of the tooth as a flexible wire, and then following it with a small plugger, especially for that purpose, adding more gold until the nerve cavity is completely filled, and lastly, burnishing this surface as hard as the filling of the external cavity.

Believing, gentlemen, that I have said sufficient to direct the young learner in the general operations of plugging, I will conclude by thanking you for the flattering manner in which you have been pleased to receive this short series of papers, regretting that they are not as deserving as I could have wished them to be, which has resulted from a want of as much time as I had originally intended to devote to them,

I remain yours, truly,

J. D. WHITE.

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From the American Journal of Dental Science.

### CASES OF TIC DOULOUREUX.

*Successfully treated with lunar caustic, by applying it in the antrum maxillare, &c.; described in a paper read before the Ohio Co. Medical Society of Virginia.*

BY DR. S. P. HULLIHEN.

MR. PRESIDENT :—I propose to offer a few observation on the effects of lunar caustic, when applied over the situations of painful nerves, as noticed during the treatment of several cases of tic douloureux.

\* Mr. Murphy, No. 110 Fourth street, can furnish the different kinds of plug files which we have in use, as it would be too tedious to describe them.

† Those three last named articles can be applied either with a piece of tape or hickor wood.

Having observed that certain diseased conditions of the antrum maxillare induced tic douloureux, and that in all such cases the painful paroxysms could be greatly soothed or aggravated by the kind of injections thrown into the antrum—that of all the injections so employed, none had so distinct, so powerful, and so extensive an effect as lunar caustic; and knowing, too, that lunar caustic had been sometimes applied over the eyelids and brows, with the happiest effect in allaying pain and undue irritability of the eyes, I determined to try it in the treatment of true tic douloureux. I say *true* tic-douloureux, a rare disease, emanating from some local cause either about the head or neck, in contradistinction to a *spurious* tic douloureux of the face, a complaint which is so frequently met with, and comparatively so easily cured; but a complaint always induced by debility, malaria, or other causes of a character purely constitutional.

But it is not my present intention to treat of the causes, nor of the pathological differences between the true and the spurious tic douloureux, nor of the still greater difference in the symptoms of the two diseases; but simply to give in detail the treatment of several cases of true tic douloureux, wherein the effects of lunar caustic will be described, and occasionally contrasted with the effects of other remedies employed in the same cases.

In the summer of 1844, Mr. J——, of Marshall county, Va., came to Wheeling, to obtain relief from an unusually severe attack of tic douloureux. He was about forty years of age; his occupation was that of a farmer, and his health good. The length of time he had been affected with the disease I neglected to note down. The nerves involved were the first and slightly the second branch of the fifth pair. The paroxysms came on from touching the affected side—often while talking or eating—and very frequently without being provoked by either of the causes just named. The attacks were electric in their character, accompanied by sensations of a *tic*—a symptom never present, I believe, in ordinary neuralgia. The paroxysms were of about one minute's duration, occurring many times every day and night; and they were gradually becoming more exquisitely painful.

**TREATMENT.**—I extracted the first molar tooth, it being decayed, and perforated the antrum by way of an alveolar cell which led directly to this cavity. The antrum was free from disease. Upon touching the outer wall of the cavity with the end of a probe, particularly if the end of the probe were dragged over the surface, paroxysms of pain were instantly induced. After the bleeding subsided, I washed out the antrum with a syringe, first with warm water and then with cold, and so alternately, until I was convinced that warm water in this particular case,

had much agency in bringing on on a paroxysm, and cold water as great an agency in allaying it. After the blood was thoroughly cleansed from the antrum, I threw into it with a glass syringe, a solution of lunar caustic, (twenty-five grains to the ounce of water,) and there retained it for a few minutes by plugging up the hole made in the jaw. The caustic had but little effect in any way. The next morning I increased the strength of the solution to fifty grains of caustic to the ounce of water. After taking up in the syringe about as much of the solution as the antrum would hold—the patient being directed to hold his head in a horizontal position, with the affected side down—it was injected into the antrum, and the opening stopped as before. In a few minutes the patient complained, first of a slight pain on the top of his head—then all over the side of his head—then over the eye, and finally in the antrum. The plug was now removed, and the solution suffered to escape into his mouth, his mouth being effectually protected by holding in it a solution of common salt.

By this time the effects of the treatment were visible. The veins of the affected side, particularly along the temple, were distended and elevated to a remarkable extent; tears streamed from the eye; the flow of saliva was unusual; indeed, every secreting vessel of that side of the head appeared to be excited in the highest possible degree; yet the patient complained of but little pain, and that pain of a dull benumbing description. The scalp and indeed the whole side of the head upon which the first and second branches of the fifth pair of nerves are distributed, was sore to the touch; but the patient was entirely free from every symptom of tic douloureux. He was now allowed to return home, and directed to wash out the antrum with cold water once a day—to use the caustic injection once a week—and to return again in three or four weeks; which he did, and reported that he never had the slightest return of the disease after he left Wheeling. I saw him about five months since, and he still remained well.

It was not until October 20 1846, that I had another opportunity of testing the good effects of lunar caustic in a case of tic douloureux. At that time Mr. Johnston of this city, brought to my office an old gentleman by the name of C——, who stated that he had been very sorely afflicted with tic douloureux for upwards of seven years, during which time he had been almost constantly under medical treatment, without any perceptible relief; that still his sufferings were so intolerable, he could not refrain from taking the medicine of every physician who would give him the least encouragement, and that he had now come to Wheeling for the pur-

pose of getting the affected nerves divided, or to undergo any course of treatment that would promise relief.

The patient was about sixty years old—in excellent health—of slender form—intelligent and very communicative. He stated that in early life he had been a soldier ; after which a surveyor ; then a merchant ; then a farmer ; and then a victim to tic douloureux. He stated that he had always enjoyed good health ; that the disease came upon him without any known cause ; that the first symptom was an unpleasant twitching of the eyelid ; then of the muscles of his face—then of a dull pain over his eye ; and then, suddenly, the disease in full force. The paroxysms were electric in their character, usually preceded by and ending in numerous sensations of a *tic*. They were from half a minute to a minute and a half in duration, and were repeated from fifty to a hundred times every twenty-four hours. The nerves most implicated were the first and second branches of the fifth pair ; the second was more affected than the first, and I was not certain but that the third branch was involved also.

**TREATMENT.**—I perforated the floor of the antrum, and after examining into the condition of the cavity, and finding it free from disease, I washed it out well, first with cold and then with warm water. Both appeared to provoke paroxysms of pain, yet with the warm water caused more severe paroxysms than the cold. I then injected the antrum with a solution of lunar caustic of fifty grains to the ounce of water, after the same manner described in the first case. However, before I could get the hole well plugged in the jaw, a most fearful paroxysm of the disease ensued, which was soon succeeded by another, and another, until the poor old man was nearly exhausted. In about ten minutes, this fearful condition of things subsided. I then increased the strength of the injection to sixty grains to the ounce, and threw a portion of it into the antrum, and there retained it by a plug. Three or four slight paroxysms of pain took place within the first five minutes ; then the patient began to complain of a sensation of heat in the antrum ; then of pain on the top of his head, and along the temple and over the eye, particularly over the eye, and, finally, in the cheek. The veins along the temple were distended, as in the former case ; the secretion of tears small ; the conjunctiva of a bright pink color, and the flow of saliva not much increased. The plug was now withdrawn, and the solution allowed to run out, its effects being neutralized in the mouth by the use of salt and water. The patient now complained of a dull, heavy and distressing pain all over the affected side, and occasionally a slight sharp pain, something like tic-douloureux ; but this was all that was felt of the disease. The next day the pain

on the side of his head had subsided ; there was much soreness of the scalp and temple ; some congestion of the conjunctiva ; a slight swelling of the cheek ; and every now and then a very mild sensation of his old complaint. The next day, the soreness of that side of his head was better ; he had slept well, and eat without producing *any return of his disease*, except, an occasional darting pain through the cheek. On the fourth day, the patient was still getting better ; matter had begun to be discharged from the antrum. On the fifth day, still improving ; has every now and then sharp pain in his cheek, just in front of his ear, but of a comparatively mild character. I now injected his antrum with a solution of sixty grains to the ounce of water. Again he had pain all over the side of his head ; again the conjunctiva became flushed, and the scalp sore to the touch ; but every symptom of disease had vanished. He left town the following day with a swelled cheek, a sore scalp, but with a light heart. He was directed to wash out the antrum every day, with water and a little soap, to use the caustic solution once a week, and to let me hear from him in two or three weeks. At the end of two months, his son called to say that his father still remained well ; that he had occasional twitchings of the muscles of the affected side of his head, but no pain ; and that, should the disease return, he would come to Wheeling immediately. He has never come, from which I conclude he still remains well.

The treatment of the next case of tic douloureux I have to lay before you, is of more interest, by far, than either of the preceding ones. The patient was one of our own citizens, and for the last fifteen years, had been a perfect martyr to the disease. You have all seen him, and many of you have doubtless prescribed for him. I mean old Mr. P——. He is now upwards of seventy-five years old, and never had any severe sickness until 1833. He was then taken with the cholera in a very severe manner, from which he recovered but slowly. After he had regained his health and strength to a very considerable extent, he experienced for some time a singular, numb-like sensation in his face, which was followed by true tic douloureux. He immediately applied to his physician, was treated very energetically and perseveringly, without benefit. He then placed himself under the care of another physician, without any better result, and then under the care of another, and then another, until every physician who would give the old man the least hope, had an opportunity of trying his skill. In 1838, I had the old gentleman under my own care, without being able to afford him any relief, save what was obtained by the division of the mental nerve. Thus did the patient suffer

and doctor for fifteen years, but still he had tic douloureux, and that, too, in its worst form.

On the 26th day of February, 1847, he called at my office, and begged to have something done that would give him a little relief. He stated that the paroxysms of pain were greatly more severe and frequent than common; that he could not speak, eat, nor even touch his face, without bringing on the pain; that he was also suffering from asthma, and a cough; that the cough troubled him most at night, and that every time he coughed, a paroxysm of pain ensued.

The nerves involved were the first, second, and third branches of the fifth pair. The first and second branches more than the third. The paroxysms were electric in their character, would continue from half a minute to two minutes, and occurred from twenty-five to one hundred and fifty times every twenty-four hours. The disease was always more severe in *cold* weather than in *warm*.

**TREATMENT.**—I perforated the floor of the antrum, and finding the cavity was free from disease, I injected into it a solution of lunar caustic of fifty grains to the ounce of water, and there confined it in the manner described in the former cases. In about a minute, a very severe paroxysm took place; soon after, another less severe; and then another still more mild. About this time, the patient began to complain of pain on the top of his head, then along the temple and over the eye, and then in the antrum. The plug was now removed from the jaw, and the solution suffered to escape.

*February 27th.*—The patient complains of a continuous pain all over the affected side of his head; some soreness; some sharp shooting pains, and every now and then a severe spell of his disease, coming on generally after a fit of coughing. I examined his throat, snipped off a portion of the uvula, it being too long, washed out the antrum with cold water, and directed him to return next day.

*28th.*—The pain and soreness of the side of the head is much abated; uvula some swelled, and very sore; the paroxysms of tic douloureux much less severe, and less frequent.

*29th.*—The patient about the same as yesterday.

*March 1st.*—No improvement. I now injected the antrum with a solution of lunar caustic of sixty grains to the ounce of water. In a few moments, the patient complained of pain on the top and side of his head, then of great heat in the antrum. Yet I continued to keep the solution stopped up in the cavity for fifteen or twenty minutes, and that, too, without materially increasing the pain in the temple and scalp.

2d.—Great soreness of the scalp, and along the temple; considerable swelling of the cheek; has no other symptoms of his complaint, except a ticking sensation, every now and then a twitching of the muscles, and occasionally a pain of an instant, darting from the front part of the ear over the masseter muscle, towards the corner of the mouth. Can eat and sleep well.

3d.—Soreness of the scalp and swelling of the cheeks still continue, as do also the *painless tic*, and the darting pain in front of the ear. The antrum was washed out with cold water, which occasioned much aching in the jaw.

4th.—Patient about the same as yesterday. Washed the antrum with warm water, without causing any unpleasant sensation.

6th.—Soreness of the scalp and swelling of the cheeks subsiding; matter discharging from the antrum; still feels the *tic* in the cheek, and still has the sharp pain over the belly of the masseter muscle. Injected the antrum with water.

9th.—Done nothing for the last three days, save injecting the antrum with warm water. Soreness and swelling of the cheek and scalp completely disappeared; still the patient feels the *tic* and the darting pain. But the *tic* and pain are not felt in the same region of the face. In this way the case remained, without any further improvement, although the same treatment with caustic, as before described, was repeated twice up to May 20th. On this day the patient had a slight return of his disease; although not so severe or frequent as formerly, yet he was amazingly alarmed. I now tried *creosote* in the antrum, of various degrees of strength, but without any effect. I then gave *morphia* a fair trial, by injecting a solution into the antrum, without producing any other effect than putting the old man very fast asleep upon two or three occasions. I also tried *belladonna* in the same way, without producing any other effect than enlarging the pupil enormously, and keeping it so enlarged for nearly two days. I also tried several other articles that had some reputation in relieving tic douloureux, but all to no purpose, except the *spts. turpentine* and *ammonia*. This appeared to have a good effect, but the effect would soon pass off, and the disease return in full force.

June 4th.—The severity of the disease is increasing. I now blew into the antrum, from a glass tube, twenty-five grains of pulverized lunar caustic. Again the scalp became sore, and the face swelled; but all symptoms of the disease at once subsided, save the *tic* and the darting pain over the masseter muscle.

7th.—The patient still remains free from every symptom of tic douloureux, except the darting pain in front of the ear. I now made an external application of lunar caustic, about two inches broad, extending from the ear to the corner of the mouth.

9th.—Has not had the slightest pain of any description in his cheeks since the application of the caustic. Still the *tic* continued, and I was

unable to remove this sensation by any course of treatment I could adopt. In this way the patient remained for five months. Then upon a warm day in the month of November, after much exercise, the patient seated himself in a hall, and fell asleep; upon waking, he had a stiff neck and shoulder; in short, he had taken cold. On the following day, he had two or three severe paroxysms of tic douloureux. He now called upon me again. I again blew into the antrum, from a glass tube, thirty grains of pulverized lunar caustic, and plugged up the hole in the jaw. I also applied the caustic over the cheek as before. The cheek now became much more swollen than upon former occasions. The soreness of the scalp was also far greater, as was the pain upon the side of the face. The next day I washed out the antrum with salt and water. In a few days the swelling of the cheek went down, and the patient was again entirely free from all symptoms of the disease, except that *mysterious tic*—it still continued. And in that condition he remains to this day.

I have now related the treatment of three cases of tic douloureux, wherein the use of lunar caustic, so far as it is possible to determine, has effected cures. I will now give you a case wherein this same remedy failed to a certain extent.

About six weeks since, Mr. Mc——, of Pennsylvania, called on me with tic douloureux on the right side of his face; he had been affected with it for several years; thinks the disease was occasioned by a severe cold. The nerves involved were the first, second, and third branches of the fifth pair; *the third more than the first or second. In this particular, this case differed from all the preceding ones.* After perforating the antrum, and treating the case after the same manner I treated Mr. P——, the pain in the first and second branches subsided entirely; but there was little if any improvement in the condition of the third branch. This patient, however, was only under treatment five days before he left the city. I have since learned that he was not benefitted by the treatment in the slightest degree. This case does not, in my opinion, detract from the value of lunar caustic in the least, as a remedy for the cure of tic douloureux; it only shows that in cases where the third branch is involved, the caustic, to prove effective, must be applied to parts different from those I have usually selected.

I will now close my report of cases in which I have used lunar caustic, with one differing very materially from all the rest.

Mrs. C——, of Short Creek, in this county, was taken sick about the first of February last. Soon after the commencement of her sickness, she had a fearful spell of flooding, leaving her unable to arise from her bed for several weeks. During this sickness, she often experienced a great aching in the back part of her neck, close to the base of the skull. At last her head had to be arranged with great care upon the pillow, to avoid this kind of suffering. About two weeks after she first felt this pain, she was suddenly attacked with tic douloureux along the temple, and over the eye. The pain was of the

most intense character. She was treated by her physicians with *tonics, blisters, morphia*, and a host of other remedies, for two months and a half, with but little if any relief. She was finally brought to Wheeling. I found, by pressure over the first cervical vertebra, great soreness; and by pressure on one particular spot, pain in the temple was instantly produced. I now applied lunar caustic over the painful region of her neck very freely. Next day she complained very much of the soreness occasioned by the caustic, but the pain in the temple and neck was not so frequent, nor half so severe. I now applied caustic over the brow, and along the temple. The next day she was entirely free from all pain of a neuralgic character, and so she still remains. \*

I must not neglect to mention, that when she came to Wheeling, she was taking quinine and iron. These remedies I continued, except that I gave her the wine of iron in place of the sulphate of iron, which she was then taking.

In conclusion I have only to add, that of all the deductions that might be drawn from the history and treatment of the cases just reported, I leave entirely to the members of the society.

WHEELING, October 10, 1848.

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## THE LAMP.

BY DR. TAFT.—*Xenia, O.*

Several accidents have occurred within our knowledge from explosions of alcoholic soldering lamps, like the one related in our last number by Dr. Duell. By using the lamp described in the following article, such accidents may be avoided. We have not found by experiment that alcohol gives so hot a flame from the blow-pipe as oil. In this respect we differ with the writer, but if the flame be large enough it will be found sufficiently intense for all practical purposes.—ED. REC.

An accurate knowledge of small matters in all mechanical pursuits, is an acquisition without which it is impossible to excel, or even to accomplish much. However applicable this may be to any mechanical department, it is equally so to the mechanical dentist. With an imperfect acquaintance with the minutiae of manipulation, necessary for the accomplished mechanical operator, what *rude specimens* are daily put forth. And one among these small, and by some uncared for, matters, is the soldering lamp. The lamp usually employed by dentists is the large oil lamp. To this lamp there are many objections: the heat or blast from it is not so powerful, and consequently not so efficient, as

the spirit lamp; this will at once be apparent, when we consider that the soot or residue of the burning oil is thrown in the blast upon the work; and for this reason the flame from an oil lamp is always sluggish; this soot or residue is more than one-fourth the weight of the oil consumed. The work will become more dirty with the oil than with the spirit lamp; both the lamp and the work soldered is more disagreeable to handle on account of the blackened oil, burned wick, &c.

The spirit lamp would, I believe, be always used, were it not for one or two objections. The most prominent objection to it is, its liability to explode. A possibility of explosion by the spirit lamp may be precluded by the following construction. It may be made of any capacity; but a lamp that will contain a pint, or pint and a half at most, is sufficiently large for any kind of work upon which it is desirable to use a blow-pipe. It should be made of heavy sheet brass, or German silver, of cylindrical form, about three inches high, and three or four inches in diameter; the top and bottom soldered on perfectly close; through the top, and near one side, a hole about an inch and a quarter in diameter is made, into this is soldered a tube, the lower end of which extends downward in the lamp within one-thirtieth of an inch of the bottom; the upper end about one-half inch above the top of the lamp. The caliber of this tube should be about one inch, for ordinary purposes. Care should be exercised that the soldering of this tube, throughout its whole length, and also in the top of the lamp, be perfect. A coil of iron or steel wire is made that will just drop into this tube, rest upon the bottom, and extend about one-fourth of an inch above the top of the tube; this coil supports the wick, which is put into it. The wick is made large enough to fill the coil, and extends to the bottom of the lamp. A cap is made, which fits close on the top of the tube, and prevents evaporation of the alcohol, when the lamp is not in use. On the opposite side of the lamp, into the top, is soldered a small tube, about half an inch in diameter, for the purpose of filling or emptying the lamp; this tube also has a cap, that fits close upon it, to prevent evaporation.

It will be seen at once, that with this construction, it is impossible for the fire to communicate with the inside of the lamp, and consequently just as impossible that an explosion could take place. Alcohol for the lamp should be ninety or ninety-five per cent. The spirit lamp is not offensive, it makes no smoke, produces no disagreeable fumes, is always clean; it can be used in the operating room, laboratory, or any where else that it may be desirable. It serves admirably for warming wax for taking impressions.—*Den. Reg.*

## CLEAVELAND'S AIR CHAMBER PLATES.

The application of artificial teeth, mounted upon a metallic base, without springs or clasps, is regarded by all experienced practitioners as a matter of great importance, and in supplying the loss of a whole denture, or of all of the teeth from one of the jaws, it has been done for the last twelve or fourteen years, upon what is usually termed the atmospheric pressure or suction principle. But, even in cases of this description, considerable difficulty has occasionally been experienced in securing the necessary stability and adhesion of the substitute to the parts against which it is placed, and for the accomplishment of which, various means have been proposed, among these was the construction of the plate or base in such a way as to leave a vacuum or air-chamber between it and the structures against which it was placed. The best description of base of this kind, which we have seen, is the one constructed by Dr. J. A. Cleaveland, of Charleston, S. C. about three years ago. The greater portion of the base covering the palatine arch consists of two plates. The upper one has an opening in it about the size of an American twenty-five cent-piece, around the edge of which on the lower side, a small half-round wire is soldered. The object of this is to prevent the thin edge of the plate from irritating the mucous membrane, which ultimately adapts itself to the opening in the plate. The lower plate is about one line from the upper.

We have used this description of base in some twelve or fifteen cases, and in every instance with the most satisfactory results. It is necessary, however, that the adaptation of the upper plate to the alveolar ridge and palatine arch, be positively perfect. By using this precaution, a single tooth may be as readily applied as a whole denture.

While upon this subject, we would embrace the opportunity of returning our thanks to Dr. Cleaveland, for the very beautiful air chamber plate which he had the kindness to send, in the early part of the fall of last year.

**WAX-HOLDERS.**—For the procurement of a perfectly accurate adaptation of a metallic base for artificial teeth, it is necessary to have a correct transfer of the parts to which it is to be applied, and to obtain which, an exact impression in wax or some other substance is indispensable. To secure this with the common wax-holder, it is sometimes necessary to take half a dozen impressions. With a view of facilitating this part of the operation, and securing a more accurate result, Dr. Cleaveland of Charleston, S. C., constructed five wax-holders, three for the upper and two for the lower jaw. The only difference in the upper, is in

size, which is varied so as to fit the alveolar border and palatine arch of almost any mouth; the lower have a joint in the centre, so that they may be made to fit any sized jaw—one is intended for taking impressions when four, five or six of the anterior teeth are remaining, and the other where all of the teeth are absent. Messrs Jones and White of New York, have moulds of these holders and intend manufacturing them for sale.—*Balt. Ed. of A. J.*

### TREATMENT OF HÆMORRHAGE AFTER THE EXTRACTION OF TEETH.

We are advised by practical writers to use in such a case divers astringent gargles, plugging the socket with lint, dipped in alum lotion, or with putty, or even to replace the tooth itself. A Dr. Soirac, of Paris, has lately succeeded in arresting such hæmorrhage, which happened thirty-six hours after the operation, by filling the socket with wax, and slightly compressing it. This simple method is rather less complicated than the means which M. Roux was on the eve of using in an analogous case. He was preparing to tie the carotid for a hæmorrhage of this description! but the patient refused to submit, and left the hospital. M. Cloquet once succeeded in arresting the loss of blood after the extraction of a tooth, by placing in the socket a piece of gentian root, cut into the shape of the tooth; this kind of stopper, by swelling up, effected sufficient pressure on the vessels to arrest all hæmorrhage. Collodin would doubtless prove a valuable agent for the same purpose.—*London Lancet.*

### STEAM INTO THE PRACTICE OF DENTISTRY.

A friend called in our office a few days since, and gave us the following:—On his way up the river, business took him across the river from Louisville, where he met an itinerating steam dentist. He was prepared with a small furnace and boiler. To the latter a flexible pipe was attached, which when a patient presented himself with an aching tooth, or wished a nerve removed, was introduced into the cavity of the tooth some *roots* or *herbs*, in flavor like garlic, were put into the boiler with water or some fluid. The furnace was then heated up—puff, puff, goes the steam, and with a hiss out jumps the nerve—all done without pain—rights sold for the use of the invention on moderate terms, &c. &c. Our informant happened to have an aching tooth, which he put under treatment; but unfortunately, for the steam doctor, the nerve had long since departed, and the garlic vapor could not restore it nor relieve the pain. Somewhat mortified, and feeling rather foolish, he *sloped*.—*Dental Register of the West.*

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# NEW YORK DENTAL RECORDER.

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JULY 1, 1849.

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## CLARK'S METHOD OF INSERTING PIVOT TEETH.

Since publishing from the Dental Register, Dr. Taylor's method of inserting pivot teeth, in which he states that the difference is little between his plan and that of Dr. Clark, we have been informed by the latter gentlemen, that the only improvements which he claims, in his invention, are the manner of securing the tube to the fang, and the snap which confines the pivot in the tube, at the same time allowing its removal, for the purpose of cleansing, as often as the wearer desires.—Both of these points are essentially different from any thing in the method described by Dr. Taylor, and as Mr. Clark contends, a decided improvement.

The operation as performed by Mr. Clark, is one of the nicest which the dentist can be called to perform. Every part of it must be executed with the exact precision of watch-work, or the whole is a failure and worse than a wood pivot. When well done, however, the fixture is very beautiful and perfect, and for central incisors where a good sized pivot can be inserted there is no doubt but the plan will work well; in small sized laterals we doubt if a pivot large enough to give sufficient strength, when split, can be used.

Those who have confidence in their mechanical skill, and sufficient time to devote to the first few cases, we advise to try Mr. Clark's plan; or Dr. Taylor's plan, or the plan of inserting plate teeth on gold pivots, as recommended in the first Vol. Dental Recorder. Any plan is better than the most common one of inserting on hickory pivots.

If the argument made use of against Amalgam by those who are opposed to its use, is good for any thing, that "there is neither study, skill, art, nor science needed," to use it, it will certainly apply with equal force to the operation of doweling a pivot tooth upon a fang with a hickory stick. *"It is a bad pivot—it is the worst kind of a pivot—it is a nasty pivot, and it is the worst pivot in the world to set teeth with, except as a pivot for the mere shell of a root which is not worth any thing else."*

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## CASES IN WHICH ETHER WAS EMPLOYED.

At Dr. Morton's office in Boston, during three weeks ending June 8th., 1849, the Letheon was administered to thirty-nine patients, for whom one hundred and twenty-nine teeth were extracted, five nerves destroyed, and one tooth excavated. The quantity of ether used was forty-three ounces. The time of insensibility varied from one half minute to five minutes, and the time of recovery from one to two minutes.

The Ether (letheon) was given to persons of various ages from ten to fifty-one years, and to those of almost every variety of temperament, causing the pulse to vary, between the commencement of the inhalation and the end, in some cases, as much as thirty-five beats; and yet there is

no case reported in which any unpleasant or dangerous symptoms were manifested beyond restlessness, and, in one or two cases, slight spasms.

The above is communicated to the Boston Medical and Surgical Journal, and would seem to indicate that the letheon is still used to considerable extent in Boston, for extraction of teeth while in this city, and in most other places, so far as we have been able to learn, it has been generally abandoned.

From this report we are led to infer that Dr. Morton's practice has not suffered so much, by his connection with letheon, as is represented in his memorial to congress, or if so, is rapidly returning again. The Dr. is undoubtedly entitled to credit for his perseverance in successfully carrying into practice the discovery of Dr. Wells, and we sincerely hope that he may live to reap his just reward.

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### NORTHOL & HOLMES' JOURNAL.

Under the above title Drs. Northol and Holmes, of Brooklyn, N. Y., have issued the first number of a kind of family dental newspaper. The following is their short prospectus :—

"The Editors and Proprietors of this Journal, after due consideration, have determined to issue a sheet once a month, not only as being a good and acceptable way of advertising, but also as affording an opportunity of familiarizing the public with useful facts in relation to the teeth, and disabusing the public mind, of the many popular errors which exist in relation to these important organs."

Here is a field for useful labor, and we welcome the new comer hoping that it may receive the proper training, and take such a direction that in youth it may be an ornament, and in age a blessing to our profession. We have long needed a paper of this kind, something which will contain articles upon the importance of proper care of the teeth, and the need of early operations for their preservation, together with a description of the nature of those operations, written in such a plain manner as to popularize the subject of dental surgery so much that the community may be able to tell the good from the bad operators. All this we believe may be done, and by blending it with other items of general interest, as the Editors have done in the present number, may be made attractive and entertaining to the general reader.

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### REFINED TRIPOLI.

An article of this kind has lately been introduced for dentists use, which is recommended for polishing the surfaces and edges of teeth after scraping or filing, finishing gold fillings, &c. It is very finely pulverized and has a grit equal to pumice. We have tried it and found it superior to any powder we ever used for polishing a gold filling and the surrounding portions of the bone and enamel, also for removing the greenish stain which collects upon children's teeth. It is also excellent for polishing the ivory handles of dentists instruments, and we have no doubt would form good basis for tooth powder.

It is for sale at the principal dental depots in the city. Try it.

### HULL'S IMPROVEMENT TO THE BLOW-PIPE.

Dr. Hull, of Mattewan, has sent us a fixture which consists of a small cylindric barrell about half an inch in diameter and a little more in length. From the centre of one end projects a small tube, into which the common mouth blow-pipe is to be inserted, and from the circumference of the cylinder issues another pipe in all respects like the bent extremity of the common blow-pipe. This little cylinder or barrel is intended to collect the moisture which so often passes through the blow-pipe and sputters upon the work while soldering.

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### HULIHEN'S SCREW FORCEPS.

A late number of the American Journal is out against Mr. C. H. Dubs' for obtaining a patent on this instrument. The Journal labors under a slight mistake in this matter.

We have seen a letter from Mr. Dubs to Mr. J. D. Chevalier of this city forbidding him to manufacture and vend what Mr. D. calls his improvement, on pain of a prosecution, &c. From this letter, it appears that Mr Dubs has only patented a ratchet and spring for working the screw and this some months after Mr. Chevalier had been making and selling the instrument with the very improvement which Dr. D. claims.

In August 1846, while at the east, a practicing dentist, Mr. D. D. Dickinson, suggested this improvement to us, and on our return we mentioned it to Mr. Chevalier who immediately set about making them. This, if we are not mistaken, was long before Mr. Dubs obtained his patent, and Mr. C. has therefore continued to make and sell them ever since without reference to Mr. D.'s threat.

When will dentists learn to drop their two-penny patents, which so degrade themselves in the estimation of all honorable and liberal men? Dr. Hullihen did not deem the original invention of importance, enough to warrant him to procure a patent on it, but gave it freely to the profession, and here comes a man who makes a slight alteration in the instrument (admitting it to have been original with him, of which there is great doubt) and forsooth he must secure it to himself by letters patent from Washington. "Oh shame where is thy blush!" If there is any professional feeling among dentists they should immediately consign such a man to an infamous and perpetual Coventry.

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### EVAN'S NEW AMALGAM.

A Clergyman in Connecticut, once observed that he did not dare to preach upon card-playing, for fear some of the younger members of his congregation might ask what it was.

Ignorance with some is the preventive of wickness, and we know not to what other principle we can attribute the absence of all reference to Amalgam, in the American Journal of Dental Science, during the past few years. Its Editors probably saw that the discussion of the subject led many to try it, and as those who once do so seldom altogether relinquish its use afterwards, the best plan for its opponents to pursue was to

keep still, or by an occasional allusion to the action of the American Society, convey to their readers the idea that Amalgam is stone dead.

In the last number, however, its Baltimore editor ventures to tell his readers, that "Mr. Evans, late of Lancaster, Pa., but now an associate of Dr. Brewster of Paris, recommends an amalgam which he conceives to be free from the objections possessed by all other combinations of mercury." The editor does not publish Mr. Evans' statement, with his recipe, and directions for using this amalgam, but, lest some of his readers "might ask what it was," he gives them in full the article condemning it, from the pen of Mr. J. L. Levison, "*an eminent English dentist.*"

This may do very well for the members of the American Society who acknowledge the infallibility of their alma mater, and yield implicit obedience to all her requirements, but we must say that we like better the old fashioned way, practiced some five thousand years since, of placing before our readers the good and the evil that they may think for themselves, try all things and hold fast to that which is good and true.

We learn from several of our friends who have tried it, that Mr. Evan's amalgam of tin and cadmium promises well, but sufficient time has not yet elapsed to fully test its virtues. Dr. Brewster has great confidence in it, and writes to a friend here that "the glory of gold has departed."

Let none of our readers be deceived by these high recommendations, but test the article, if they choose, cautiously, and investigate fully, before using it to any great extent. We do not believe that gold is ever to be eclipsed by any material for filling the great mass of decayed teeth, and least of all by amalgam, nevertheless this article may be an improvement upon the kind now used and prove very useful in "*certain cases.*"

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### BALTIMORE COLLEGE OF DENTAL SURGERY.

It will be seen, by referring to the first page of our advertising sheet, that the faculty of this institution, announce their tenth annual session of lectures and instruction, in all the branches of surgical and mechanical dentistry.

We advise those who intend to avail themselves of the benefits of this term, by all means to be present on the last Monday in October.

Dental Colleges are fast attaining an importance which will soon make their course of instruction indispensable to the practicing dentist, and students cannot spend a few months so profitably to themselves, as at one of these institutions.

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### ABBY'S GOLD FOIL.

By reference to the advertisement of Dr. Chilton, it will be seen that a reduction has been made in the price of Abby's (formerly Bulls) gold foil. This article has long sustained its reputation as a most excellent foil, there are many who have used it for years, and give it the preference to any article now manufactured. It can be had in any quantities from Dr. Chilton.

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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Vol. III. AUGUST 1, 1849.

No. 11.

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For the Dental Recorder.

## PATENT RIGHTS IN DENTISTRY.

DR. C. C. ALLEN,—

My Dear Sir:

In the June No. of the Dental Recorder I notice my letter and circular, to which you have been pleased to append certain strictures of your own, reiterating your objections to the "manner" in which "Hill's Stopping" has been introduced to the profession, &c., &c. Now, sir, I know you to be an *independnt* man as to the expression of *your* opinion and views, on various subjects; and I have the more confidence in presenting my own to you for publication in the Recorder, from this fact, although I presume we shall differ, as wide as the Poles.

And as many *severe* things have been said, in various quarters, touching the matter of patenting any invention or discovery in our profession, I solicit the favor of the publication of a few thoughts upon that subject, and especially so, in view of what has been said in the Recorder upon this matter. Allow me to say, however, in passing, that neither my note or circular which I sent to you, were designed for publication in the Recorder, but for your own *private* perusal. Yet I do not complain of the disposition which has been made of them. But since they have been the occasion of such *severe* strictures, I trust you will allow them to stand as the occasion of my own vindication.

It seems to me, that you, sir, with certain others, are morbidly sensitive upon the subject of patents. So much so, that you cannot even fellowship, in professional association, a man who shall be guilty of such *woful misdemeanor*. You seem almost to have forgotten the position you occupy with respect to the "stringent" regulations of the American Society, and to go even beyond them, thus "out-Heroding even Herod himself." (A.)

Pray tell me what is there in the nature of a Patent so extremely odious, that a man must be driven from the society of his fellows, who shall have the temerity to apply for, and receive, from the constituted authority an instrument of this kind. Let us examine this matter a little, and see whether we may abide the day of trial. According to Webster, a "Patent is a writing from the proper authority, granting an exclusive right to a person or persons, for an invention, during a term of years." It is an exclusive right to an invention, secured to any individual by the highest Legislative and Judicial authority of the land, who may fulfill the conditions required, in order to obtain the same. In this respect, it differs not materially from the nature of a *Copy-right*, which is also an exclusive control over, or right in any original writing or composition. This is also secured by law.

The same principle is embraced in the bestowment, or granting of Diplomas—which are, simply, "letters, or writing, conferring certain *privileges, distinctions, or honors*." Closely allied to them are rewards of any kind, such for instance, as *Medals, Honorary titles*—either civic or military. Indeed, this same principle runs through every department, and almost all transactions of life.

When a man receives "Letters Patent" he has certain rights and privileges, which all have not. This is precisely the case with him who secures a Copy-right—or he who receives a Diploma—a medal—a title, or reward of any kind for distinguished ability or service. Such, then, is a *Patent*.

As to the policy of a system like this, I would observe, that among civilized nations, there seems to be great unanimity of opinion, with regard to the advantages of a system of this kind. So much so that it is difficult to find a nation, or a statesman of any eminence, who are not in favor of it. Its advantages to Science and Art, are almost incalculable. For while it stimulates ambition, it rewards genius, which otherwise might starve. In our own, and different European countries, the most liberal provisions are being made for the extension and perpetuity of this system. The Parisian Academy of Sciences acknowledge the same principle in offering rewards for the purpose of stimulating the spirit of investigation and research; and how much the world is indebted to it no tongue can tell. And I can conceive of no argument, that goes to militate against Patents, which does not apply substantially to this course. And even now, if I mistake not, a premium is offered by the New York State Dental Society on the same plan. Labor and talent should always command a premium, and it always will; and such

premiums will receive their name and character from the nature and character of the service or talent displayed. The plodding mechanic—the ingenious artisan—the indefatigable student—and brave warrior, all receive their characteristic distinctions and wear their several honors as they should. This I conceive to be the true policy. It is founded in the strictest propriety, and is productive of noble results. It is true to the nature of man, and necessarily must be beneficial. The mother thus deals unconsciously with her infant child, and the child, true to its native instincts, responds accordingly. The schoolmaster makes his first present as a “Reward of Merit,” upon precisely similar principles, and the result is equally striking. And in the granting of a *Diploma* by the Faculty of a chartered institution, the self-same principle governs.

The soldier, in time of battle, unsheaths his sword and rushes to the contest, not so much because he is thirsting for human blood as that he thirsts for human glory. And this principle is amply sufficient to hold him firm and steady amid the terrible concussion of the field of strife. A *Patent of bravery*, alias, the *Victor's Wreath*, is his reward. And he is written down Capt. Maj., or something else, as the case may be, and this is his distinction. But the same principle is here recognized, and it matters not what the title may be, whether a “Knight of the Cross,” or of the “Snowy Plume.”

Thus, our plain Yankee boys and Native Republicans visit the old world, and return home flush with the titled distinctions which they may have received abroad; and we learn to esteem them the more for these distinctions. *Yes, these things are all right and proper*, but a *Patent* (which is a certificate of skill, labor and ingenuity from the government under which we live,) is a *most despicable thing*. And, forsooth, a man who shall have the temerity and hardihood to procure such a thing should be expelled from any and every honorable association of scientific men! What strange notions must have taken possession of the mind of the editor of the *Dental Recorder*, when he gives publicity to such a statement, and flourishes, at the same time, upon his door-plate the ominous title of M.D! If not upon his door-plate, at least upon the cover of the *Dental Recorder*.

We certainly mean no disrespect to titles—especially when well earned, (as we think is the case in this instance) nor do we mean any disrespect to Dr. Allen, but we simply refer to a principle which differs in no essential particular from the one under consideration. But, we ask, what do those significant capitals mean? Do they not confer *peculiar privileges*? Do they not constitute a mark of honorable distinction among men? Are

they not *exclusive* in their application? In short, does not the very idea of a patent cover the whole matter? We think so. (B.)

Shall we be told that patents are often granted by government where no real discovery has been made, or useful thing invented? Very true, yet who does not know, on the other hand, that the advantages of wealth, favoritism, or friends, have been the means of sending many a poor fool into the world, with plenty of sheep-skin and but little brains—with plenty of titles, but no real merit. Dr. Foster, in his late address before the Alumni of the Baltimore College of Dental Surgery, relates an anecdote showing the influence of a diploma (which see) and the advantages which the graduates of that College possess over their less favored brethren. This, in my opinion, is just as it should be. Yet I contend that the principle of granting diplomas, is the very soul of a patent, *and is right*. (C.)

Again, in taking up a scientific work, either on Law, Medicine, Dentistry, or Theology, about the first things that strike the eye, after reading the title page, are the ominous words, "*Copy-right secured*"—"Entered according to an act of Congress." Ah! how is this? wonderful sticklers these for a "free and full interchange of professional advantages!" Death on quacks and patent nostrums! Can't even *tolerate* them in professional circles! Yet they can scarcely publish the simplest treatise or essay but they must secure a patent, I beg pardon, a "copy-right." This reminds me of a circumstance to which my mind was directed a short time since. In the city of New York I was greeted by a professional friend, who, by the way, has been *very severe* on me and my compound, because of its being patented. In the course of our conversation he informed me that he had been getting up a sheet for a dental record or journal of operations, and *had "secured the copy-right."* I could not but think within myself how strongly inconsistent mankind can be.

But why is this? do these men wish to make money "out of their professional brethren." Certainly! No other reason can be given. And now, in the name of common sense, where is the difference in principle? Is the one ungenerous? so is the other. Is the one opposed to a reciprocity of professional advantage? so is the other. For my life I can see no real difference. Yet the one is *honorable*, strictly *professional* and proper, while the other is *disreputable*—*unprofessional*, and sufficient cause for *exorcism*. At least, this seems to be the doctrine of the Recorder. (D.)

If a literary production, in proportion to the time spent and energy exhausted, is a man's capital, so is a mechanical result, principle, or compound. Both may have cost years of labor and

toil, and only have their existence at the expense of wealth and ease, both conferring great blessings on the world. Why, then, should one be upheld and the other condemned? Many considerations address themselves to my mind here, which I must leave out of this communication; but which are capable of being urged in this connexion with advantage, had we space to occupy in the columns of the Recorder.

We should be glad, however, before closing this communication, to say a few things, more especially applicable to our own particular case.

Says Dr. Allen, "Had Dr. Hill made no secret about the manufacture of his stopping, but published the recipe and supplied the market with the material, if he wished to make money in this way, at a reasonable price, we doubt not, it would have been favorably received, and almost every dentist would have given it a fair trial, while most of them would no more have thought of making it themselves, than physicians do of preparing their blue pill or diachylon."

A professional friend from the South, whose communication reached us prior to the Dental Recorder, (in consequence of a temporary absence) writes as follows in view of the above remarks of Dr. A.: "I should consider it strange if Dr. Hill ever had another call for his 'Stopping,' after publishing his recipe, for every Dentist in the land would put the materials together, and many of them change the proportion and each call it a stopping of his own. This has been too often the case, and most valuable improvements have been thrown into disrepute by the selfishness and envy of those who had no right or claim to them. I think the Editor's remarks illiberal and unjust."

It is possible my friend may complain of the liberty I have here taken, yet it seemed to me that these remarks, from a distant portion of the country, and so opportune in their arrival, might be used without a breach of propriety.

The article in question is exceedingly difficult to prepare, so as to make it just as it should be; a slight variation in the composition, or an apparently trifling change in the mode of working it, may spoil it completely. Even with a recipe, and full instructions, without experience, it would be almost impossible to make. These circumstances, without other necessary caution, in the hands of others, would ensure its inevitable destruction. (E.) We think, that independent of these, and like considerations, we have other *peculiar* circumstances, sufficient for our justification. But we ask not for mitigating circumstances—what have we done? Who have we wronged? Whose rights have we invaded? Why, then, do our professional brethren

bear so heavily upon us? Are we so craven, selfish and mean, as to be unfit for association with gentlemen? Then let us be proceeded against; let the public know *why* and *wherefore*, that they may be on their guard. We will "bide our time." But if otherwise, let us hear no more *taunts* and *jeers*—no more snuffing of the offended nostrils. Let us receive no more public abuse through the public journals. If we are in error convince us and we will hasten to retract; but if we are right, we shall stand though the sky falls.

As it relates to myself, in the matter of expulsion from membership in any Dental Association, for *this* cause, I am perfectly at ease. I highly prize the fellowship of honorable minds, and the relationship I may be able to sustain to them. Yet if these principles, suggested by the editor of the Recorder, are to govern them in this matter, *I have no tears to shed*. "Lay on Macduff." (F.)

Very respectfully yours,

A. HILL.

Norwalk, Conn. July 1st, 1849.

(A.) So far from this being correct, we were for several years a member of the American Society and fellowshipped with holders of both patents and secrets, although, to the honor of that Society be it said, that most of their members practice reciprocal interchange of sentiments, except on amalgam, and communicate to one another freely anything new which they may invent or discover; but, as there were a few who held, with Dr. Hill, to the propriety and policy of keeping all they learned for their own benefit, while they were always ready to receive new ideas from others, we introduced a resolution declaring such a course dishonorable in any member, which resolution was unanimously passed, but has since been repealed (probably quite as unanimously, for the members of that society like a flock of sheep, always follow the bell-wether). If the resolution had been rejected it would not have been sufficient cause for our withdrawal from the society. Again, when the New York Society were framing their by-laws we used all our influence, in committee, to incorporate an article prohibiting patents and secrets, and succeeded in doing so, but the society rejected it, and we submitted cheerfully to the will of the majority.

When Dr. A. Hill was proposed for membership we voted for

him, secret, patent and all, because it was in accordance with the fundamental law of the society to admit members under these circumstances, had it been otherwise we should have voted differently. If those members who now hold patents and secrets are to be expelled, it should be done by the adoption of a principle into the constitution, which will not act against an individual, but against a class, and this should have been done at the organization of the society. Our readers can therefore judge whether we are "*morbidly sensitive*" upon the subject of patents, "and cannot associate," &c. In the American Society the question was a very different one. It was only by trampling on the constitution, which guaranteed to each member the right to communicate his opinion, that those who refused to sign the odious protest were expelled. While a member of that society we always used our influence to sustain the spirit and letter of the constitution. One word in reference to the publication of Dr. Hill's letter and circular. We certainly supposed that he intended both for publication in the Recorder, as one was already printed, and the other contained a kind of challenge to the whole profession to test with him the comparative merits of amalgam and "Hill's Stopping," and offered to "*demonstrate*" to the writer of the articles on amalgam, or "any one else," the correctness of his opinion.

(B.) We do not think so, and are surprised that Dr. Hill can see no difference between an exclusive right conferred upon a single individual and a right conferred upon all who will comply with certain legal requirements instituted for the safety of the community; but with the general subject of patents and patent laws we have nothing to do and never had. The fruits of invention and discovery are undoubtedly just as much a man's property as the fruits of the farm which he cultivates or the money which he invests, and we would as soon deprive him of one of his rights as the other.

It is only in associations composed of members of the same profession united for mutual benefit and improvement, that we insist upon the unfairness of one member obtaining a patent on some trifling improvement or invention for his exclusive benefit, as if one of a company of gold diggers on finding a large lump should refuse to divide it with the other members. If there

were in the mechanical department of dentistry a field for great and important discovery or invention as in many other branches of mechanics there would be more propriety in obtaining patents for them and a sufficient object would exist to induce even a generous man to secure its profits to himself; but who among the many dentists that have obtained letters patent for their inventions has ever received either profit or reputation by one. Let any one contrast the standing, in our profession, of those who have secured patents and those who have freely published to the world their inventions, discoveries or improvements, and say whether he would not rather rank with the latter than the former. The greatest discovery of modern times, that of producing the anæsthetic state, was patented and we have heard from the lips of the patentee himself, how deeply he regretted having taken that course. Had he given it to the world as did Jenner his great discovery, and Sympson the use of Chloroform, he would have stood, in the estimation of many, among the great benefactors of the age. As it is, however, he has since done all in his power to retrieve the false step which he has taken.

In our comments upon Dr. Hill's circular we put the following question which he has gone all round but has not answered. "The Dentist, in his legitimate practice, if he associates with others, is constantly receiving from them new ideas, which materially improve him in his business; with what show of fairness or justice then can he refuse to reciprocate, when by his industry or talent he is fortunate enough to take a step in advance of his brethren in the art or science of dental surgery? So far as reciprocity is concerned he may be compared to a tippler who hangs around his companions in a bar-room, always ready to drink at their expense but never willing to "*treat*."

(c.) The influence of a diploma is no doubt great in giving immediate confidence to the public in the person upon whom it is conferred, and the higher the standard of qualifications in the institution from whence it emanates and the more generally it is known the more useful and important does the diploma become. Like circular letters from those whom we know, or more pro-

perly, letters of introduction and recommendation, they at once inspire us with confidence, but after all they are only *prima facie* evidence in favor of those who present them, as, after a thorough acquaintance, we often find the person presenting them no better than the ones who come before them with less imposing credentials. With patents, however, it is entirely different. The fact that a thing has been patented is no recommendation of it with the public, but often the reverse, as they have learned that, especially among dentists, the patent is oftener secured for the purpose of giving the patentee an excuse for advertising its exclusive use, and thus drawing customers to his office, in the hope that he may pick up business in other departments of dentistry.

(D.) Upon the subject of copy-rights we do not recollect, with Dr. Hill, that the Recorder has ever had any thing to say; but we do not see any difference, in principle, between the man who has perfected his invention and he who has completed his manuscript for the press: here, however, the comparison stops, for while the former may be given to the world through the pages of any scientific journals, the publication of the latter involves an outlay of capital, and if the publisher has no security another edition may appear from a rival press, at a lower price, which may involve the first in a heavy loss. The copy-right is therefore for the security of the printer or publisher, as well as for the author. We do not wish to be understood as opposing the right or justice of obtaining either patents or copy-rights except under the circumstances which we have always alluded to when speaking of the former, among persons associated in a society or in a liberal profession. Under these circumstances the motto should be, "Freely ye have received, freely give," or there is no liberality about them, only an association of schemers for their own aggrandizement.

(E.) If this article is so difficult to compound and prepare properly for use (so are many pharmaceutical preparations which the doctors do not think of attempting) it seems to us that there is less danger of its being attempted generally by dentists, and instead of this being a mitigating circumstance it should only

embolden the inventors to make known their compound without endangering their profits. Dentists would soon find it for their interest to purchase and not attempt to manufacture.

(F.) Dr. Hill asks, "What have we done? Who have we wronged? Whose rights have we invaded?" and we promptly answer in the negative, *Nobody's*: but he proceeds; "Are we so craven, selfish and mean as to be unfit for association with gentlemen?" and as he has accused the Dental Recorder of saying many severe things already, we will not answer this in the affirmative, but leave every *gentleman* to answer it for himself. We do not intend, and never have, to say severe things of Dr. Hill, or to do him or any other person injustice, but in the matter of professional intercourse with our brethren we have always intended to imitate the example of our superiors by freely communicating the little knowledge which we possess upon professional subjects, to such as ask it, and when we cease to be animated by this principle we shall cease to "prize the fellowship of honorable minds," for we shall not feel at home in their society; but we do not wish to apply this to others. "As a man thinketh so is he."—ED. RECORDER.

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### DR. FOSTER'S ADDRESS.

We have been politely favored with a copy of this address from the author, which, from its great length, we are precluded from publishing; but, as it contains some views and assertions opposed to the course pursued by the Dental Recorder, we shall briefly notice them. This address is written with an energy and fervency of style which characterize every thing which comes from the pen of the author, and although dogmatic and bigoted upon some subjects, at times provokingly arrogant and inclined to be bombastic, yet there is a frankness, we may say bluntness, about him which is quite to our liking. We like a speaker who on controverted points comes out flat-footed and tells his auditors exactly what he means, leaving no small hole to crawl out of when assailed by those who differ with him in opinion. Dr. Foster is an ultra supporter of the arbitrary measures of the American Society, and violently opposed to the use of amalgams for filling teeth, in all cases, because he believes it bad, and not because those who use it *say it is better than gold*. He is willing to acknowledge who he votes for and who against;

there is nothing underhanded in his course, but every thing is open and above board. He is also opposed to the foundation of dental societies except when all the members are of the highest standing in the profession. Such are some of the prominent views set forth in the address before us.

We are pleased to see that Dr. Foster, after remarking upon the general progress of knowledge in all departments of science and art, bears his testimony to the general improvement in dental surgery. He says, "In no other professional or mechanical pursuit has there been greater improvement, or a more rapid increase of well-instructed and skillful workmen." This great and favorable change he attributes to the influence of "a few liberal-minded men, ardent in the pursuit of all that science and art could furnish, to enrich their labors and establish for them a character as philanthropists and benefactors of their race." Who these philanthropists are for whom Dr. Foster entertains such high respect he does not tell us except the late Dr. Robert Nasmyth of Edinburgh, whose son Dr. F. recognized among his auditors and took this occasion to compliment the father as "a gentleman eminently and deservedly distinguished." Now no one can entertain a higher respect for the memory of Dr. Robert Nasmyth than ourselves; but we must confess that it sounds strangely to hear Dr. Foster, who is so much opposed to amalgam that he cannot professionally associate with those who use it, actually complimenting a man who was avowedly in favor of its use, in certain cases, and this too in the halls of the Baltimore College, which is yet innocent of participating in amalgam practice, and in the presence of Dr. Nasmyth's son who actually bore the testimony to his father's "*malpractice*" in his own mouth. We should naturally have expected that Dr. Foster would class Dr. Nasmyth with such men as are described in the following extract:

"There is yet one other class of operators, whose opportunities, whose means of degrading the profession are more ample and more fatal.

"The well-instructed, well-educated, enlightened, yet unprincipled; men who are capable and scientific, have attained high rank and station, and who having gained the confidence of the community, act in direct violation of right, using impure materials, where the purest only should be used, and that sometimes surreptitiously. These are mal-practitioners of the worst description, in as much as they exert a powerful influence in increasing, and encouraging, that class of operators last mentioned."

The class "last mentioned" is such as all admit to be im-

posters, "ignorant pretenders, sensible of their deficiency in knowledge and capacity, wilfully bent on imposition, caring not for the success of their operations if they can only succeed in obtaining their fee." We care not how hard Dr. Foster or any one else bears upon downright quackery and imposition, no honorable and just man would wish him to spare the lash from the back of such as these; but we protest against the inconsistency of praising a Scotchman and censuring a native American for the same offence. If the use of amalgam is malpractice in Paris it is malpractice in Edinburgh, and yet Dr. Foster moves, in the American Society, for the expulsion from membership of an amalgam dentist residing in the one place while he compliments in the highest terms the same kind of practitioner in the other. If Dr. Foster was ignorant of the fact that Dr. Nasmyth used amalgam in his practice it only shows the absurdity of being governed by one idea, and should teach him, and all others, not to refuse to associate with men because they differ from him only on a single point of practice.

We may remark in reference to the paragraph quoted above that well-instructed, well-educated, enlightened men, who are capable and scientific, have attained high rank and station, and gained the confidence of the community, have no sufficient motive to act in direct violation of right by using impure materials (tin or amalgam) where the purest only (gold) should be used, and that surreptitiously. Unprincipled men do not attain high rank and station and gain the confidence of the community. If for a day they attain popularity (like the Craucours) it is not by gaining the confidence of the community, but by creating a transient excitement which for a time directs public attention towards them. If their rise is like the rocket their fall is like its stick. Perhaps if Dr. Foster possessed more of that beautiful Christian virtue which "vaunteth not itself, is not puffed up, thinketh no evil, believeth all things, hopeth all things, endureth all things," he would attribute the use of these materials, by such men, to different motives.

Notwithstanding the salutary effect which the precepts and example of the few liberal-minded men have produced, in elevating the standard of our profession, it is still, according to Dr. Foster, in a lamentable condition; he asks, "Why are there so few competent practitioners among so many pretenders in this science?" One reason which he assigns is the imperfection of existing knowledge. Young men do not properly estimate the difficulties which are to be overcome before they can become expert operators. Many enter the field with little previous preparation by a proper course of mental and manual discipline,

and this little obtained in too short a time and at too cheap a rate, from those who are incapable of giving proper instruction.

There is also on the part of many a constitutional unfitness and incapacity to acquire such knowledge, by this we suppose he means a want of that peculiar mechanical ingenuity which is essential in the dentist. Many begin to operate with very limited knowledge, hoping and expecting to acquire correct principles and improve their practice by experience.

That there is much truth in these alleged causes of superficial education and consequent bad practice among dentists we freely admit, but we apprehend that if all the causes were examined and exposed it would be found that some of these *very liberal-minded men* whom Dr. Foster so much delights to honor, have indirectly and negatively, if not directly and positively, lent their influence to produce this very imperfection in dental education. Twenty-five or thirty years since the success of a few eminent dentists in this country drew public attention to the importance of operations upon the mouth for the better preservation of natural teeth, as well as repairing their loss by artificial means.

The demand was then great for skillful and scientific dentists, and yet the terms for tuition demanded by the most eminent practitioners, were so exorbitantly high as to preclude the possibility of many who would gladly have availed themselves of their instruction from doing so. From five hundred to one thousand dollars was frequently asked for instructing students in dental surgery.\* The consequence was that but few could afford to pay for their instruction, and were forced to enter the offices of men who were less qualified to instruct or commence without any instruction at all, and trust to subsequent observation and experience to perfect them in their operations.

Young dentists were watched by these men with the most jealous eye. If one entered their office he was regarded as a spy, and if he asked any questions relating to practice he received only evasive answers. We do not say that this was the case with all good dentists who were then in practice. There were some honorable exceptions, true-hearted men who, whenever they found a young man sincerely desirous of improving in his profession, were ever ready to take him by the hand and put him in the right way. The most eminent physicians and surgeons charge students from fifty to one hundred dollars per annum for tuition, and we never could see the justice of

\* The following is taken from Mr. L. S. Parmly's lectures, published in 1820, soon after his return from Europe:

"Mr. Parmly, being desirous that his peculiar treatment of the teeth, his operations and general views upon the subject, should be as widely diffused as possible, for the common benefit of society, undertakes to qualify gentlemen of liberal education, for practice as Dentists on the following terms. *For practice in London* \$1000. *In any other city of Great Britain or America* \$700. *For foreign practice* \$500. These terms apply solely to a finished course of instruction, including every particular of the art with which he is acquainted."

the dentist chaging more for teaching one speciality than the physician for instruction in the whole.

Among the causes which retard a reformation in dental education, Dr. Foster mentions the facilities which are given to bad operators by recommendations which they so often receive from magistrates, doctors of divinity, doctors of law and doctors of medicine, who are unqualified to judge whether the men whom they commend to the patronage of their friends and the public, are good or bad dentists. The public press also comes in for its just share of his invective, for inconsiderately puffing men of whom they know nothing except by their advertisements. The remarks upon this great cause of evil are very just and merited, and the remedy which he proposes is the general enlightenment of public opinion that all may become impressed with the importance of the subject.

Dr. Foster devotes a large part of his address to the subject of societies and associations of dental surgeons. Here is his idea of what a society should be :

“ In order to ensure the permanent existence and success of a society, the subject should engage the attention and secure the interest of every individual of known influence and character in the profession, within its precincts, (to the exclusion of all who are not qualified, in every respect, to assist in the work,) and with these it must be a common cause, or effort will be useless. The more exclusive such an association—the more fixed and peremptory in its restrictions—the more exacting in its requisitions, as to the attainments and qualifications of its members—the greater will be the desire and the ambition of all good men and true, to fit and prepare themselves to unite with it—and thus, and only thus, will it be certain to accomplish the great and praiseworthy object of its organization.”

The following extract from his address delivered before the American Society of Dental Surgeons, and published for the first time in the address now before us, shows Dr. Foster's opinion of the manner in which the members of such an association should be made to toe the mark, and submit to be dictated to by a majority without murmuring or making wry faces.

“ Do gentlemen who are admitted into this association think they have the right to act independently of its constitution, its laws, the expressed will of a majority in regard to what is, and what is not ; what does, and what does not, constitute malpractice ? There are such, there are those whom I have heard assert, that this society has not the right to control individual members. I trust and hope, sir, the society will use the power they possess, and will govern all who have signed the constitution, or cast them out.”

Now we would like to ask Dr. Foster, or any man of common sense, if he thinks that among any considerable number of well-educated, thinking, practical dentists, there would be no difference of

opinion as to what is good and what bad practice in any particular case or subject which might come up for discussion ; and if so, whether the opinion of the minority must submit, and say they are ready to acknowledge that what they had before thought was black must be white, because the majority say so. Suppose the majority of the members of the American Society, who use tin foil in certain cases, were to declare that to fill such teeth with gold, as Dr. Foster does, was malpractice, and insist upon his signing a protest against gold, and pledge himself not to use it hereafter in such cases. We ask, Would Dr. Foster kiss the rod that smote him thus ? Would any but the veriest slave submit to such arbitrary requirements ? And yet this is the very position in which those who believe in the virtue of amalgam fillings are placed by the majority. Who does not see that such dictation strikes at the root of all private opinion, and conscientious dictates of what is right and wrong ? That it is the duty of societies of this kind to investigate all mooted points of theory and practice, and throw all the light of their collected knowledge upon them, for the advantage of its members, none will deny ; but when it has done this, it has done its whole duty, and cannot be made responsible for the opinion of individual members. But we have done with this subject. Dr. Foster says the constitution authorized it ; we say that it did not, and defy him or any other person to show where the constitution gives authority to a majority of the members to compel the minority to sign a solemn protest and assertion against the sacred dictates of reason and conscience : for the pledge against amalgams was exactly this, and no more or less, to all who disbelieved it.

Dr. Foster, after sufficiently praising this arbitrary course of the American Society, next attacks the Society of the State of New York. This is the grand denouement of the whole address, and for which he has been preparing the reader. By advocating a very exclusive system in the formation of dental associations, he would be the better prepared to attack the liberal principles upon which the New York Society was based. We shall not attempt a defence of this society, for it needs none, but briefly notice some of the objections which Dr. Foster urges against the manner of its formation and the principles upon which it has been governed, and correct some of the errors and misstatements which we find in this part of his address.

At a preliminary meeting composed of almost forty dentists, held on the evening of Oct. 30, 1847, it was resolved to call a Convention of all the dentists in the State, "to organize such a society as they shall think best calculated to promote the success and usefulness of the profession." The Convention met on the 17th November, and after adopting a constitution, proceeded to ballot for members. Every member who signed the constitution at that time was voted in by a majority of the members of the Convention. The constitution adopt-

ed by the Convention says not one word about the qualifications of candidates for membership, but left that subject entirely in the hands of the society, to be incorporated into the by-laws after the society should be organized. It farther provided that those who had been voted in by the Convention could not remain members without also signing the by-laws after they were adopted. The assertion of Dr. Foster, therefore, that "after the passage of Art. 2d, Sections 3d and 4th, (which are sections of the by-laws, and not, as he asserts, a part of the constitution,) any one present, if no other objected, had the right to *sign the constitution*, and *ipso facto* he became a member," is, to say the least, a gross misstatement.

The *principle* upon which Dr. Foster objects to this course in the Convention, is, that it "was too great an extension of the privilege of membership at the very outset," which he contends was the "fatal mistake" into which the American Society had previously fallen, and which "was the cause of all that strife, bickering and contention which marked its career." We have only to say that the New York Society was founded for the purpose of uniting the dentists then in practice for mutual improvement, and that while the American Society confined itself to this laudable object, there was no "strife, bickering, or contention," but when it deserted the principle laid down in its constitution of "advancing the science by a *free communication and interchange of sentiments*" and attempted to coerce the "sentiments" of its members, then the strife commenced.

Dr. Foster affects to believe that the American Society occupies a higher position now than it has ever done. We are at a loss to conceive how this can be unless the use of amalgam is the only evil that has ever existed in the society, for the late arbitrary measures have not purged the society of any except those who use that article, and among them are some of the best operators with gold that were ever in the society, and not one who is below mediocrity, while, on the other hand, there are still in the society some who are among the poorest operators we ever knew anywhere. The constitution has been made more stringent in reference to the admission of members, but that was never objected to by the amalgam party. So that the average is no better, if we except amalgam filling, than it was before. To borrow an illustration from Dr. Foster, we should say that while the "honorable fraternity of blacksmiths" has lost many of its master workmen, most of the "miners, colliers, and bellows-makers," and several *blowers* and *strikers* remain.

The next complaint which Dr. Foster makes of the Convention, or as he styles it, "the originators of the New York State Society," is, that "an attempt was made to pass an act by which the society should confer a *diploma* upon each of its members." This he characterizes as an "assumption of power," a "high-handed act of usurpation." Bah! We presume that Dr. Foster will not deny that there are gentlemen among the members of the New York Society who are worthy

to receive a diploma, conferring all the honors and titles which an irresponsible and unchartered society has any right or power to confer; and that his nerves may not again be disturbed, we will now inform him that at the last meeting of the society a committee was appointed to take into consideration this subject, and that such a diploma will ere long be conferred upon such as are entitled to it, but not upon "each of its members" (unless they shall be found worthy) as has heretofore been done in the American Society. Furthermore, it was never the intention of the originators of the society that each member should "*of right*" be entitled to his diploma; but such was the low estimate put upon the dentists in the state of New York, by the conservative members of the Convention, that they did not dare to trust the society with this power even after the candidate had passed a rigid examination.

Dr. Foster also complains that he was "called to order in that meeting (meaning the convention) and the gag law enforced *for too free an expression of opinion*." Now the simple facts are that much time had been occupied by discussing the different articles and sections of the constitution. It was the evening of the second day, and growing late. Dr. Foster had the floor, when the President stated, in the most courteous manner, that the convention would proceed much faster with its business, if the speakers would confine their remarks to the subject under discussion. Dr. Foster asked if he was out of order, and the President replied that he was, inasmuch as his remarks had nothing to do with the question, when Dr. F. immediately sat down. It was therefore for *irrelevancy*, and not for a too free expression of opinion. Great latitude was given to the speakers, and almost every opinion ever conceived was there expressed, and no person was called to order for it. All who witnessed the proceedings of that Convention could not but admire the impartiality, forbearance, and prompt decision of the presiding officer. That there was considerable excitement manifested upon the subject of conferring diplomas, and some sparring between the conservatives and liberals, is true, but we had supposed that it was all settled by the vote of the Convention and forgotten long since. It is with deep regret and mortification we now perceive that Dr. Foster, like a child that runs away from its companions to complain of them to his mother, has taken this opportunity to publish to the world these trifling disagreements and discrepancies of opinion. We thought it a great stretch of impudence when Dr. Foster and his companions sought to coerce the conduct and opinions of their own fellow-members in the American Society, but when we see him assuming the guardianship of our whole profession, and arrogantly censuring the conduct of his brethren, because their ideas of association differ somewhat from his own, we can only say with a smile,

"So have I seen, with armed heel,  
A wight bestride a common weal;  
While still the more he kicked and spurred,  
The less the sullen jade has stirred."

It is said the devil himself can quote scripture for his own purpose. This is not more inconsistent than that Dr. Foster, who in the American Society insisted with the obstinacy of Shylock himself upon "the due and forfeit of the bond," should now be mouthing the words of Portia. Where were these beautiful sentiments of mercy, when members were proscribed for opinion's sake? Justice was then as now the plea, but there was no mercy to season justice. The members of the N. Y. Society will not proscribe him for "opinion's sake;" they are not disposed to retaliate, although some of them have been driven from the American Society for "*too free an expression of opinion*," and for practicing in accordance with that opinion.

### SPRINGING OF PLATES WHILE SOLDERING.

DR. ALLEN:

Since the conversation I had with you, on the subject of remedying the springing of atmospheric pressure plates while soldering, I have concluded to write a description of my method, and send it to you for publication, if you think it of sufficient interest. I very well know that I suffered a great deal of inconvenience from that cause, before I hit upon a way to bring them back. I suppose many of the readers of the Recorder may be troubled in the same way; for in conversation with Dentists, I frequently ask the question, "How do you get along with plates that warp while under the blowpipe?" In almost all cases I have received the same reply, "O! I press them back to the model with an instrument or hammer the best way I can." My method is simply to swedge the plate after the teeth are soldered on. I do this by casting a matrice with a vacant space for the teeth, and I construct it in the following manner: I take the model of the jaw, to which I fit the plate, and wetting Plaster of Paris, rather thick, I build it on to the ridge of the jaw, against which the teeth rest, an inch or more high. When the plaster has set, I pare it off smooth, and cast the lead on to the die as high as the plaster. When it is cool I take the plaster out and try the plate. If the teeth touch, pare off the lead till they do not hit in the least, then putting the die and matrice together, I bring them down with a few smart blows. The most refractory plate is subdued to a perfect fit instantly. If you think the suggestion of interest, please give it a place. I much disapprove of patents or secrets in the profession, and if practitioners would communicate "*minutiæ*" that they have originated, or that is very successful in accomplishing the end desired, we should be enabled to compare ideas, and as a profession make progress.

I am yours truly,

M. W. SHERWOOD.

Williamstown, Mass., July, 1849.

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# NEW YORK DENTAL RECORDER.

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AUGUST 1, 1849.

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## PIVOT TEETH.

We have often spoken in terms of condemnation of the ordinary method of inserting pivot teeth, by means of the common hickory dowel, as a very unsatisfactory operation, yet it is oftener practiced than any other method, because it is the most simple, and therefore quicker performed than any other, and because the profession are always supplied with a good assortment of this kind of teeth. In many cases sound fangs, which, if properly treated, might be made to sustain a tooth for ten or twenty years, are sacrificed in two or three. This is always the case when the antagonistic teeth press the artificial one forward, making an opening on the posterior part, between the crown and the fang, for the lodgment of decomposing particles of food.

We have published a plan of our own, (see Dental Recorder, Vol. I. page 97,) which entirely obviates the difficulty, and effectually protects the fang from a liability to decay from this cause. We have set teeth in this way for many years, and always, when the gold pivot was large enough, with the most perfect success. The methods of Dr. Taylor, of Cincinnati, and of Mr. F. H. Clark of this city, have also been fully explained in the Dental Recorder. Since the issue of the last number Mr. Clark has sent us the following letter, which contains a very fair offer to those who choose to accept of it.

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*To the Editor of the Dental Recorder.*

Dear Sir—As my new method of preparing the roots of natural teeth for the reception of artificial ones has attracted some attention, I wish to put the members of our profession in the right in regard to my views with respect to its general introduction.

My wish is to have it used by those only who are sufficiently skilled in small mechanical operations to insure success. I am fully aware of the impossibility of accomplishing this delicate operation without much patience. I have secured a patent for its protection against the ill usage of careless operators, and likewise for the reputation (in part realized) which it is calculated to give the inventor.

Your objections to patent rights, Mr. Editor, I am not prepared to combat. We think differently on this subject, although I believe our views on other subjects relating to our profession are generally in harmony.

The use of my invention was at first tendered to all who would purchase the cylinders of me. These were offered with their appurtenances and instruments for their insertion at prices much lower than any dentist could manufacture for himself. There not being

sufficient demand for them to pay for my trouble, that offer was withdrawn.

I now offer as follows: Any dentist who will exhibit sufficient evidence of his ability to insert these linings in such manner as to make them useful to his patients and not discreditable to the invention, and will make application in person or in writing for the privilege before the first of October next, shall be granted the right gratuitously for one year, provided he shall agree to give me the credit of the invention, by making it known to his patrons as F. H. Clark's patent lining for the roots of natural teeth, to which artificial ones are to be attached.

I am convinced that few dentists of large practice can spare time to give this lining a fair trial; but I am equally certain that the younger members of the profession may, if they choose, make a handsome addition to their business by an effort to introduce it into use, and at the same time feel a consciousness of being greatly useful to their patients. The Recorder of March last contains all that is believed to be necessary by way of description.

F. H. CLARK, Dentist, 118 Ninth street.

In cases where the fang is much decayed, in the funnel form, so as to make it necessary to fill around the pivot, this gold tube or lining is an excellent protection against the further progress of caries; but as Mr. Clark observes, the operation patented by him requires "much patience and ingenuity." One of the greatest difficulties consists in properly inserting the screw to hold the tube as well as the proper adjustment of the catch which holds the pivot in the tube. These are the only improvements which he claims to hold by patent, and those who desire to avoid these difficulties, and also the patent-right, can do so by pursuing the following plan, which we have practiced for more than two years with very satisfactory results, where the roots are much decayed, as described above:

We procure gold tubes of any desired length, and of two different sizes, the smaller for the laterals, and the larger for the centrals and the eye teeth. These tubes must first be soldered securely the whole length, then a fine threaded screw is to be cut on their outer surface, which for convenience may be cut the whole length at once. The root is then to be prepared by removing all the decay from the lower part, and drilling the upper, or sound part, as deep as the fang will allow. A screw is then cut in the fang as high up as it has been drilled by passing into it two or three taps until a perfect thread is formed in the dentine. It is necessary to use at least two taps to avoid straining the fang too much by the operation, and also to prevent the thread from crumbling, as it would be apt to do if it were all cut at once. The tube is then screwed in as tight as it can be, without straining the fang so much as to induce inflammation, or endanger its splitting, and cut off with a fine saw. The opening between the tube and the margin of the fang may now be securely filled with gold

foil, which will be held very securely, if well packed, by the screw on the tube. It is then ready for the artificial crown, which may be set in any way the operator chooses, taking care not to infringe upon any person's patent-right.

Previous to using this screw we practiced winding the upper portion of the tube with cotton thread or silk, and forcing it into the fang; but in many cases this soon became loose and the whole fixture came out in a few months, but this has not happened when we have used the screw, which has now been a little more than two years. We have adopted this plan in several cases where the fangs were decayed up so high that less than one eighth of an inch of the screw held in the sound dentine, yet the tube has held the crown secure and firm.

If it be thought advisable to leave a vent to the fang, this may be done by cutting a small groove on the side of the pivot, if gold, with a common graver or by cutting a groove in the fang as high up as the end of the pivot, then drilling a small hole through the side of the tube communicating with the groove; this being done and the tube inserted, a small wire should be passed up through the groove into the tube, the gold is then packed solid around the tube, after which the wire is withdrawn.

When the dentist has his tubes and his screw taps prepared, it takes but a few moments longer to insert the tube and fill around it with gold than is required to fill an ordinary cavity in a decayed tooth. Those who prefer it can use platina tubes, and a filling of amalgam, but we prefer gold because it can be forced in and made more solid, around the tube, than amalgam. In most cases, a tube may be inserted large enough to admit the wood pivot, if the operator prefers it; but we consider the gold pivot and a plate tooth much better. There is no operation performed by the dentist, that is more unsatisfactory than the ordinary method of inserting pivot teeth, and no patient would submit to it, if he knew how much more thorough and efficient a method is pursued by a few dentists whose only aim is to do their work in the very best and most efficient manner, even if they do not make quite so much money by it at first. Patients and the public are fast learning, and will, ere long, be much better informed upon the general principles of dental surgery than they are at present, and will then be better able to appreciate the services of those who are truly faithful, than they have heretofore been.

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## NEW YORK SOCIETY OF DENTAL SURGEONS.

At the last meeting of this Society an interesting report was made by Dr. G. E. Hawes, one of a committee appointed at a preceding meeting to examine the subject of making casts for swedging gold plates, and report to the society the best materials for this purpose. Many interesting facts were reported by Dr. Hawes, but as this report was extemporaneous and informal, and as the committee was

continued, although notes were taken at the time, we have not thought best to publish them until a more full and formal report shall be made at a subsequent meeting. The subject is full of interest, and embraces an extensive field for research and experiment, which, if thoroughly investigated, may throw much light upon the subject, and be of great assistance to the profession generally, for whom the Society of Dental Surgeons of the State of New York profess to labor. We hope the committee will be prepared to make a full report upon this subject at the annual meeting, which takes place on the second Tuesday in September.

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### AMALGAM FILLING.

A correspondent of the *Dental News Letter* states that he had recently a molar tooth extracted from the lower jaw, which had been filled with amalgam about four years, during which time it was as useful as a sound tooth. He says, "A short time since I was required to ride several hours on quite a chilly night, and became very cold. On the next morning the tooth in question pained me severely, and towards night became agonizing. I had it extracted, and, on examination, found, in the little tuft of cellular structure, on the point of each fang, a number of small globules of fluid mercury." \* \* \* "All together would have weighed something over a grain."

If this result had happened within a few weeks after the tooth was filled, we should have thought that the mercury was the principal cause of the irritation which proved the exciting cause of the pain and ulceration; but this fluid mercury had in all probability been imbedded in the cellular structure for nearly four years, and during that time no symptoms of salivation, he says, were observed in his case. Neither does it appear that any oxidization had taken place in all this time. We should not like to carry these minute particles about, for fear of oxidization, absorption, and a manifestation of the mercurial effect upon the system; but the above case shows the perfect harmlessness of fluid mercury in the system.

A case was also reported by Professor Caldwell, late of the Medical College at Lexington, where a gentleman swallowed, in ounce doses, a pound or more of tin amalgam, to expel a *Tænia*. Of these ounce doses, about two or three were voided; the remaining ones, coming in contact with one another, in the small intestine, united together, forming one mass, which could be distinctly felt, when the patient bent forward so as to relax the abdominal muscles, about the size of a pound ball. When the case was reported, this mass had remained there for several years, and gave no uneasiness except when the patient took violent exercise, such as riding on horseback, when the constant pounding which it kept up would produce a local soreness for a short time; but no symptoms of salivation were manifested.

Notwithstanding such facts as these, there is much traditional fear and superstition connected with quicksilver. A lady in our office a short time since asked us if we ever saw it put in a pot where a pudding was boiling. She said that it would throw the pudding out of the pot as fast as it could be put in. We did not doubt it, after witnessing its potent effects in the American Society, where it kicked up a great row, and actually expelled several members.

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### THE RIGHT SPIRIT.

Mr. Thomas W. Evans writes the *Dental News Letter* as follows, in reference to the new amalgam which he has recently introduced to the dental profession. Whether this amalgam is a good material for filling teeth or not, each dentist ought to judge for himself; but all must admire the liberal manner in which he has made known its nature and composition to the profession. He says, "The first in the profession in London have pronounced it the very best [compound] ever invented. Finding this, *I cannot feel myself justified in withholding it from the profession. I propose publishing it freely. I have never had anything belonging to dental science that I wished to conceal*; and this being an article intended to benefit humanity, *I therefore wish every one to be the possessor of it.*"

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### DENTAL NEWS LETTER.

This spirited little quarterly has closed its second volume, and its proprietors propose to enlarge it, if the dentists will promise to sustain it with their communications. We shall be glad to see it thrive, and only wish the profession would give it the desired pledge.

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### THE CASKET AND THE RIBBON.

This is a review, by W. H. Dwinelle, M. D., of the two congressional reports from the committee to whom the memorial of Dr. Morton was referred, asking compensation from Congress for the discovery of the anæsthetic, or pain-subduing property of sulphuric ether. The report of the majority, which concurred in the claim of Dr. Morton to the discovery, has been noticed in the *Recorder*; that of the minority, got up by the friends of Dr. Jackson, we have not seen. This review shows up the consummate impudence and folly of Dr. Jackson's claim to the discovery in a very clear and convincing manner; while it fails quite as signally to prove that any discovery has been made by Morton. The fact is, and it seems to us that every just-minded man must see it so, that Morton is entitled to no credit except such as is due him for having demonstrated to the world the fact that he could produce, with sulphuric ether, the same pain-sub-

duing effect which Dr. Wells of Hartford had produced by the nitrous oxide gas. When Congress compensates Morton for this, the same justice or generosity, we hope, will be extended to the widow and orphans of the late Dr. Wells.

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### IMPROVEMENT IN TEETH.

The Pennsylvania Society of Dental Surgeons, at its last regular meeting, passed the following resolution :

*Resolved*, That a premium of twenty-five dollars, in a gold medal, be awarded by this society for the greatest improvement in porcelain teeth, viz. : single gum, molar and bicusped, plate and pivot teeth ; twenty-five of each kind to be sent to either of the following committee. Also resolved, that a medal of twenty dollars be awarded for the best block teeth that may be presented. The reception of specimens to close March 1st, 1850. *Committee*—Mr. C. C. Williams, Dr. J. D. White, Philadelphia ; Dr. Ely Parry, Lancaster, Pa.

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### BALTIMORE DENTAL COLLEGE.

The tenth annual announcement of this institution has been received. One of its best features is the infirmary, where all the students have an opportunity to extract, fill, insert, or perform any other operation upon the teeth under the immediate eye of a competent teacher. This is outdoing all the clinics in medical colleges, as there the professors and teachers only operate, while the student has the privilege of looking on ; but in Baltimore the tables are turned—the student takes the instrument and the patient in hand, while the teacher is the looker-on.

The infirmary and dissecting-room are opened to students one month before the commencement of the regular course of lectures. Students should by all means avail themselves of this month's instruction. We recommend a course of lectures to all who desire to qualify themselves for dentists, and also to those who now call themselves dentists, but who are sensible of the imperfection of their operations.

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### OUR DELINQUENT SUBSCRIBERS.

We trust that all who are indebted for the *Dental Recorder* will, on the receipt of this number, without longer procrastination, enclose to the Editor the amount of their indebtedness, which is but a drop to each, although the aggregate is essential to the life of the *Recorder*. Those who do not remit before the issue of the next number, which will contain an index and title-page for the volume, we shall think care but little for it, and we shall not, therefore, mail that number to them.

# NEW YORK DENTAL RECORDER.

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DEVOTED TO THE THEORY AND PRACTICE OF  
SURGICAL, MEDICAL, AND MECHANICAL DENTISTRY.

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For the Dental Recorder.

## ADJUSTING DOUBLE SETS OF TEETH.

DR. ALLEN,—

Dear Sir;

With your permission, through your excellent monthly, I desire to record a few thoughts which may benefit some, at least, of my professional brethren.

The item I propose to treat is the adjusting of a plate, or plates, to the mouth of the patient, so that a correct order can be given by letter, accompanying the models, at any distance from a manufacturer. I wish to be understood I am writing in reference to what is commonly termed block-work; but the principle is equally correct for mounting cases of single teeth.

Dr. Harris, in his "Principles and Practice of Dental Surgery," 3d Edition, page 683, says: "After having accurately fitted both plates, the operator should proceed to obtain an antagonising model by placing a rim of soft beeswax between the convex surfaces of the two plates, of about one inch and a quarter in width. He should now ascertain the length he intends to have the teeth, make a thin wedge from soft wood, in width, exactly corresponding thereto, pass it through the wax between the plates at the medial line, put the whole in the mouth of the patient, adjust the plates in their proper places on the alveolar ridges, then direct him to close his jaws naturally until the plates are brought in contact with the edge of the wood."

This done, the Dr. directs the operator to make from this arrangement an antagonising model as described, page 662; the Dr. then introduces a very important caution against the patient improperly closing the mouth. Now this is the point at which the operator meets defeat, for the great majority of patients in

their effort to do right are sure to do wrong, and it is not in the power of the operator to detect the wrong until after a great deal of vexation and trouble.

Again, on examining Dr. Goddard's late work, I find he passes this point in silence, and why, I cannot conceive. It is not because it is so well understood that it needs no explanation, for there is not a writer on mechanical dentistry (as far as my reading has gone) who has approached it as it is practiced by our most scientific dentists.

Excepting Dr. Solyman Brown, for whom I cannot but entertain the highest respect, for the liberal and manly course pursued by him, in publishing his treatise on mechanical dentistry during his co-editorship of the *Journal of Dental Science*.

Dr. Brown says, in paragraph 93, "When the beeswax has been adjusted on the plates, so as to occupy in the mouth the same position which the teeth are desired to assume, taking care that the lips have just the desired support, the face its proper length, and the profile its natural outline, the operator should mark upon the wax in front the exact centre of the mouth by a perpendicular line drawn from the upper to the lower plate, whereupon the whole may be carefully withdrawn from the mouth. The patient may now be dismissed provided the size and color of the teeth have been satisfactorily determined."

Here I conceive is the true principle, and the only one that can be followed with any degree of certainty, and all I expect to be able to do is to bring out a few points. In the first place, then, I try my plates in the mouth, one at a time, and satisfy myself that they are a perfect fit, free from any disposition to cut the integuments of the mouth, and yet so close as to take hold of the parts to which they are adjusted. Here I would say, in reference to the lower jaw, it is very common to find, where persons have been wearing what is called a three-part set, that is an upper jaw and two side blocks, with springs, that the continual pressure and other causes have produced considerable depression, from about the first bicuspid to the second molar tooth. To prevent the lower plate pressing too severely, and thereby causing a great deal of suffering to the patient, and rocking of the lower plate, in consequence of the more readily yielding of the front of the lower maxillary, previous to making my metallic cast, I supply this depressed part of the plaster cast with melted wax, until the buccal and sublingual edges of my plate will be raised about the thickness of a dime, in the most depressed part; but on the ridge of the jaw, not more than half that thickness, this terminating gradually, posteriorly and

anteriorly with the model. I also prevent the plate from pressing upon the sublingual glands, in the same manner reducing the thickness of the supplied wax as it passes over the mylohyoidean ridges. Having ascertained that the plates, in all probability, will be comfortable to the patient, I proceed to mount my beeswax on each plate; having sufficient to trim to the height and circle, I wish to have my blocks, remembering it is this that gives the lips the desired support, the face its proper length, and the profile its natural outline. This I do with great care, placing the lower plate in the mouth, and retaining it in its proper place with the thumb and finger of the right hand, and passing my left arm over my patient's head, I place the upper plate and its wax in its place; I request my patient to close the mouth, whilst I keep my plates pressed to their parts; by this means I can see the part of the wax which comes in contact first and trim it accordingly. I so repeat until the edges of the wax come in contact equal in all parts exactly as I wish the teeth to be. The medial line must be drawn from plate to plate, and also a line drawn in the same manner on each side about the bicuspid by the aid of these three marks, as the patient opens and closes the mouth, any inaccuracy in the arrangement can be detected. When there is but one jaw required, the wax should have the distinct impression of all the articulating points of antagonising teeth, giving the required fullness and length of the front teeth.

In justice to science and truth, I cannot refrain from making a few remarks on the subject of block teeth at this time, as there has been some attempts from high, as well as low sources, to speak against them. All I would say on this point, is, that nearly all who sustain the highest professional character in this city, use them for their permanent works, whilst, for their temporary cases, they use single teeth. Dr. Harris, in his work on Dental Science, page 689, says: "It has been customary among dentists manufacturing their own porcelain or mineral teeth, in the construction of an entire set or series for the same jaw, to fabricate them in blocks; but this method, for several reasons, is objectionable. In the first place, it adds unnecessarily to the weight of the piece, and causes it to feel clumsy and awkward in the mouth; and in the second place, it is more liable to be broken in a fall, an accident which can sometimes only be repaired by making a new piece. A piece composed of single teeth with artificial gums is not liable to the above objections. A little more time and tact, it is true, is required in grinding the teeth to make them fit each other and the plate more accurately than in the manufacture of blocks, but

when properly adjusted and attached to a base, they make a lighter, and at the same time a more durable substitute. If, too, by any accident, one or more of the teeth should be broken, they may be easily replaced with others."

In the first place, why do dentists who can manufacture their own teeth, prefer making them in blocks rather than setting single teeth, which they can always have on hand, and those who have not the means of making them prefer waiting sufficiently long enough to get them made? I leave the answer to those who think.

To Dr. H.'s first objection as regards the weight, upon a comparative estimate, I find the difference between twenty-eight single-gum teeth and the same number in blocks, suitable for the same case, to be less than 4 dwt., so that the unnecessary weight is only imaginary; as to the clumsy awkwardness of blocks in the mouth, patients who have worn both kinds properly adjusted, will never consent to return again to the use of single teeth, preferring the firmness and durability, and last but not least, the cleanliness of a set of well fitted blocks.

Dr. H.'s second objection is, their liability to break from a fall. We do not expect our patients to drop their teeth about any more than we do that they will drop their watches about, so for the same reason we should all have dumb crystals inserted in our watches. As to the time and tact required to set single teeth, I will here give the Dr. himself in a more recent work, (*Dictionary of Dental Science*, article *Block Teeth* :) "When well adapted to the inequalities of the parts against which they are placed, they often subserve a very good purpose. But it is more difficult to fit a piece of this description than single teeth to a metallic base."

Yours truly,

THOMAS WARDLE.

#### REMARKS UPON THE ABOVE.

Young operators frequently have great difficulty in procuring a correct antagonising model. It is often impossible for patients who have long been without teeth to close the jaws correctly, that is naturally, with the plates and wax in the mouth. In almost all cases, they protrude the chin too far forward or incline it to one side. An examination of the anatomy of the joint will show that in the natural articulation, when the inferior maxillary is elevated so as to bring the upper and lower teeth in contact, the condyle is as far back in the glenoid cavity of the temporal bone as it can be made to go. "In the movement

of *depression* the inter-articular cartilage glides forward on the eminentia articularis, carrying with it the condyle. \* \* \* In *elevation* the fibro-cartilage and condyle are returned to their original position. The forward and backward movement is a gliding of the fibro-cartilage upon the glenoid articular surface, in the antero-posterior direction; and the movements from side to side, in a lateral direction.” \*

Those who have had much practice can generally tell when the jaws are closed in the natural manner. After the plates, with the wax mounted upon them, are placed in the mouth, by directing the patient to close it slowly, and at the same time applying a slight backward pressure upon the chin, as the muscles relax, the condyles will generally glide backwards into their natural position. There are some cases, however, which give the most experienced great trouble. These happen when a false articulation has been induced by irregular natural teeth, or where artificial dentines, which are not properly antagonized, have been worn a long time. If, for instance, the lower teeth close anterior to the upper, this will frequently prevent the condyle from gliding as far back in the glenoid cavity as it naturally does when no such impediment exists. After years of use in this way, an artificial joint is induced, for if the individual now loses his natural teeth the inferior maxillary will, when elevated, without the person being conscious of it take the same relative position to the superior maxillary that it did before the natural teeth were removed. The same condition is sometimes induced by wearing for a long time artificial teeth which are badly adjusted. We have seen persons in which the lower teeth took the position forward of the upper when the jaws were closed, who, by making a slight effort, could draw the lower jaw back far enough to make the front teeth touch at their points; but before the cusps of the upper and lower molares came in contact, the superior and inferior incisors must close by each other like the blades of a pair of scissors, and during this motion, such is the tapering or wedge shape of the incisors, the whole of the inferior maxillary must glide forwards from one-eighth to a quarter of an inch farther than the normal position. By long habit,

\* See Wilson's Anatomy.

which becomes second nature, this comes to be the natural articulation, and mastication is as unconsciously carried on in this way as when the condyle of the inferior maxillary glides back to the posterior part of the glenoid cavity. The same abnormal condition of the parts may be produced by wearing artificial teeth which are badly adjusted, thereby causing the wearer to close the mouth unnaturally.

It is in these cases that the dentist experiences the greatest difficulty in finding the true position of the lower jaw. If he forces his patient's chin too far back, it is just as bad as though it were too far forward; for when the teeth are completed the jaws will not close to accommodate *them*, but just as by long practice they have become accostomed to.

The practice which we pursue, when we have reason to know or suspect difficulty, effectually prevents any mistake or disappointment in cases of this kind. It is also the safest practice that we know in all cases, and we would recommend it to those who have not had experience enough to perfectly understand and master all the difficulties which occur at this stage of the operation of inserting an entire set of teeth.

After the plates are fitted to each jaw, the wax is placed upon them, and made as near the desired form and length of the teeth as two entire blocks can be. These are then removed and in their places Plaster of Paris is substituted, taking care to leave the plaster large enough to bear cutting away to the exact size required. When the plaster has become sufficiently hard we boil it in melted white wax, to destroy the absorbent property which it naturally has and which causes the lips and cheeks to adhere to it, so as to prevent that free motion which it is desirable they should possess. This being done, we stick them to the plates by heating both the blocks and the plates, and placing wax between them enough to make them adhere; they are then put in the mouth, and when close together we mark, with a lead-pencil, from one block to the other, in the centre of the mouth, and near the position of the second superior bicuspid on each side. We then bore holes in the plaster, attach a pair of springs to the blocks and place them in the mouth again. The patient can now open and close the jaws with the most

perfect freedom ; as the plates are held firmly in contact with each jaw there is none of that constant fear felt, when only wax is used, of its falling from the upper jaw, when the mouth is opened too wide; nor of compressing it out of shape if closed too tight. The plaster occupies no more space in the mouth than ordinary block teeth, thereby giving more freedom to the tongue than when the plates are loaded with wax. These blocks may now be cut away or added to, until they give the proper expression to the face, and are an exact model of what the teeth are to be. Time may be given to consult friends and acquaintances, if a young operator has not confidence in his own judgment, as these blocks may be worn for a day or two if thought desirable.

When the teeth are to be ordered in blocks from a manufacturer, the dentists can carve these plaster blocks into the exact size and shape which he desires them to be made. Those who have trouble at this stage of the operation, and it is by far the most critical point in the whole process, we advise carefully to try the plan described above, as by so doing they cannot fail of success.—ED. REC.

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### LETTER FROM F. H. CLARK.

*New York, July 19th, 1849.*

DEAR SIR :

Enclosed is a letter which I received yesterday, which you are at liberty to publish or not as you may deem expedient. My knowledge of the case is briefly as follows : Mr. J. called upon me in April last, for professional aid, and stated his case, as near as I can remember, in the following manner, "I have a tooth," said he, "which you will probably condemn as unworthy of filling, and recommend its extraction. I wish, however, to have the experiment tried of filling it with amalgam, and if it fails it shall be my loss, and no blame shall attach to you." He then very carefully described its symptoms which he has repeated in his letter. I examined the tooth and found it wore a most unpromising look. It was an upper wisdom-tooth, decayed from its grinding surface quite down to the gum next to the second molares. I was very strongly tempted to decline having any thing to do with it, but his anxiety to make the experiment, and evident personal knowledge on the subject of our art, induced me to try ; the result is before you, and although it

is reasonable to suppose that he will hereafter have trouble with his tooth, and eventually lose it, it may do him much good service previously, and he will never regret the effort made to preserve it. I will here remark that this gentleman bore the evidence in his mouth of recent dental operations of an excellent quality, and I could wish that his letter did not bear evidence that he had been obliged to listen to illiberal insinuations from some member of our profession, about "regular" and "irregular dentists." I did not learn from him who had been his dentist, which I regret.

In connexion with the above, I will add the wish, that members of the medical profession might, by some means, be induced to look as carefully into the subject of Dental Surgery as my correspondent has done. When they do so we shall proceed with much more confidence in our efforts to do good than we now do, and I hope the members of our own profession will likewise find it for their benefit to watch symptoms as carefully and give them to the public as clearly as he has done.

DR. C. C. ALLEN.

F. H. CLARK,  
Dentist, 218 9th street.

### AMALGAM FILLING.

*Washington, July 14th, 1849.*

DR. CLARK, SIR :

Nearly three months having elapsed since you filled a tooth for me, which was in a *very critical condition*, I feel capable of pronouncing upon the success of the operation. Its history is briefly this: About three months previously to seeing you, one day, eating the hard crust of some baked meat, one of my pupper grinders—the *third*—suddenly *crushed* all to pieces, as I supposed at the time, but on examination afterwards, I found that the tooth had been for some time decaying, until a large portion of the crown had become destroyed—for, by this accident, a large opening was revealed, into which I could thrust the end of my tongue.

The interior of the cavity was not much discolored. It appeared to be a species of *white decay*, or softening of the earthy portion of the tooth\* leaving the animal matter in a cartilaginous state, which could be *peeled up in layers*. This I did slightly with my penknife in probing it, but to my *great pain*. The cavity was now so sensitive that I could not bear the pressure of even a toothpick of quill, or *soft pine wood made blunt*, with which I endeavored to clear it

\* Being of a scrofulous temperament, my teeth are very *white* and clear, but at the same time frail and soft, from a deficiency of earthy matter and lack of *density*.

of food, &c. The nervous pulp was only covered by this slight protection of *softened bone*, which yielded on the slightest pressure, and gave me a momentary paroxysm of pain. So of mastication. With all my care, it would *sometimes* happen that a little soft food would get forced into the cavity, and even that, with the air forced in with it, would cause me *severe* pain momentarily. Fluids, above or below the temperature of the mouth, on being admitted to the cavity, would cause me the same suffering. Ordinarily, however, with nothing impinging upon the nervous pulp, the tooth was in a state of quiet, and gave *no pain* nor uneasy sensation; nor had it *ever* done so unprovoked, up to the time I saw you—the 19th of April last—to get your professional assistance in the case. You advised *extraction* of the tooth, as probably every other able and conscientious dentist would have done. But, at the same time, you were *willing*—as nine-tenths of the self-styled “regulars” *would not* have been—to *experiment* with it, at *my own proposal and risk*, in a manner that they unqualifiedly pronounce unprofessional and “dishonest!” But, sir, that doesn’t make it so; and I am going to compliment your judgment (and your skill) for having the independence to practice upon your own convictions of right and justice, unprescribed by the judgment of any other man, or even *set* of men. My own knowledge of *teeth*, gained from a study of the medical sciences, and personal experience gained by being the *subject* of not a few “operations” and experiments, gave me to understand that my tooth could not be plugged with any kind of *foil* of metal: first, because I could not bear the necessary excavation; secondly, I could no more bear the necessary *pressure*; and thirdly, the thinness of the remaining crown would not withstand that pressure, even if the other two propositions were favorable. Then is not the tooth a fit subject for *extraction*, and for that only? I answer, *it would be* in “certain cases,” and even *generally*. But mine is a certain case, in which *it cannot be spared*. Having heretofore employed the *regulars*, and invariably applied to them in the early stages of dental disease, they have so often considered far more favorable cases as too formidable for cure; or their attempted “operations” have *failed* to such an extent, that I have undergone “extraction” until nearly *edentated* of that important class which serve for *mastication*; by which the act is rendered difficult, and sometimes painful. I know, moreover, that their vaunted “artificials” would subserve me a less efficient purpose than those as good as you rendered the one under consideration—“mounted” by Dame Nature.

I proposed, then, that a *very slight* excavation be made, to re-

move loose particles ; the cavity wiped quite *dry*, and filled with an *amalgam* of silver and quicksilver ; which would fill all the irregularities of the cavity with but slight pressure, and would soon consolidate, and thus hermetically *seal it up*, and protect the nervous pulp from foreign substances ; arrest the further decay in the cavity ; *for a time* at least, (that is all I promised myself, and *you* didn't even promise that) because decay could but imperfectly go on without *air* and *moisture* ; and render the tooth *of service in mastication*.

You consented to this *experiment*,—(whether such amalgam would *preserve a decayed tooth* was to me no problem ; because I had seen one, much decayed, so preserved in good condition for *five years*, and by its healthy, bright appearance, promising five more, and I was told by a respectable dentist that he had known such fillings preserve a tooth well for *ten years*)—and you performed it accordingly, with but inconsiderable suffering to me ; and I will now give you the result up to this time, which is within a few days of *three months* after it was done. The tooth gave me some dull pain that night following, and occasionally a momentary paroxysm. I think you *jarred* it too much in breaking down the thinnest edges of enamel around the mouth of the cavity. The fore part of the night, I thought a high degree of inflammation would follow from such irritation, and from the presence of the filling, which seemed to impinge a little. But it did not, neither did the pain continue. I slept, and next morning awoke with it *easier*—indeed nearly quiet. But it was nearly four weeks before the tooth became *accustomed* to the contact of hot or cold food, or fluids particularly, and to hard *pressure* in mastication. During that time, if by accident it incurred either of these, a *severe* heavy pain would momentarily pass over it—more like the light touch of a *white hot* iron than anything else I can imagine.

But these occurrences were rare, and only lasted during the time specified. For *two months* now, I have freely used that tooth daily to bite the hardest crusts and substances of food ; it bears the contact of *ice-water* or *hot tea* equally as well any *sound* tooth ; and during this last-mentioned time, has given *no pain* or even the slightest uneasiness. I have examined it recently in a strong sun-light, with mirror and mouth-glass. The filling is *bright*—no discoloration around it. Neither has the tooth turned “black,” nor even blue ; but is of a healthy yellowish *natural* color. The reasons are, simply, the nervous half has retained its *vitality*, through the instrumentality of the filling ; and the filling has *not* “oxidized,” become absorbed, or *shrunk*. On the contrary, I think such fillings *expand* in hardening. The *gum* is

healthy around it—the *periostum* is healthy. I can put hard pressure on the tooth ; it is never tender, or unnaturally “long.” In short, it is certainly “doing as well as could be expected,” if not *better* ; and as for *myself*, so far from being *poisoned*, or “killed by bad dentistry,” as I have been told followed like treatment in another case, I am able to offer you this tribute of justice, and to subscribe myself,

Your very obliged,

G. JONES.

DR. F. H. CLARK, Dentist, New York.

## SUCCESSFUL OPERATION AND TREATMENT OF THE ANTRUM MAXILLARIA OF THE RIGHT SIDE.

BY CHARLES H. DUBS, D. S.

*Description.*—The patient, Dudley Hunt, in his 15th year of age, had been afflicted with this terrible disease for eight months without any proper surgical treatment, his parents being under the impression it was only the effect of a severe cold. He was first brought to me on the 3d of April, 1845, and on examination I found there was considerable expansion of the cheek and nose of the right side. The palate bone protruded much into the mouth, and the extension of the bones was so great as to produce an entire obstruction of the right nostril, also the swelling so as to raise the floor of the orbit, pushing the eye so far out of its socket as to cause total loss of vision on that side. There was a fistulous opening at the prominent part of the molar bone of a fleshy nature, from which pus was issuing, and communicated with an opening in the gum opposite to the anterior bicuspid tooth of the right side. There was also another fistula near the canthus of the eye opening into the right nasal cavity.

*Operation and Treatment.*—The first and second molars being much decayed in the crown, I extracted them, and perforated through the socket into the cavity, causing considerable pain ; on the entrance of the trocar, a large quantity of greenish and yellow pus discharged freely from the opening, and was assisted by several injections into the sinus, which our youthful sufferer bore admirably, and the flow being very copious, in a little time afforded him material relief. After this, a cool emollient poultice was applied over the whole surface of the affected part.

April 4th.—Very little pain this morning, and the swelling somewhat subsided, but found the external openings as also that in the mouth suppurating profusely and emitting a very foetid odor. On this account I injected the sinus with a weak solu-

tion of Chloride of Soda in the proportion 1 to 12 of Aqua Rosa, luke warm. This gave very little pain, and was followed by much coagulated lymph, and hard curdled matter. The emollient poultice of Slippery Elm was continued, morning and evening.

April 5th.—On examination I found the parietes of the alveolar much decayed, and also the external plate of the jaw. My patient was so timid, that he required much persuasion before he would submit to another operation. I now removed the whole decayed part of the upper maxillary extending from the posterior bicuspid near the socket of dens sapientia, and thus formed a proper outlet. Occasional injections into the sinus were followed by much lumpy and fetid matter, along with a number of fragments of exfoliated bone. The nasal opening being completely closed, the solution found its outlet through the fistulous opening near the internal canthus. On examining this cavity with a probe I found a large elastic substance which I judged to be a fungus mass. This the patient refused to allow me to remove, so that I had to confine myself to the use of injections of a weak solution of Chloride of Soda, Tannin, and Myrrh, until the 8th of April, when he consented to submit to the operation. Though the parts were very much inflamed and painful, I cut the fungus entirely away into two pieces, which, together, were about the size of an egg. Much lumpy matter and small pieces of dead bone followed. The injections and poultices continued.

April 9th.—Removed a piece of exfoliated bone from the fistular near the canthus, it being a portion of the nasal bone. I also discovered the palatal bones in a state of necrosis; emollients continued.

April 10th.—I made an incision from one fistula in the cheek to the other in form of a triangle, which enabled me to remove several pieces of bone that were exfoliated, and among them was part of the molar and nasal bones. I now gave injections of Sulphate of Zinc, dissolved in warm water, thrown into the opening, and the lotion of Chloride of Soda into the sinus, and was much pleased to find the nasal opening previous.

April 14th.—The diseased parts have been discharging freely, and the patient doing remarkably well up to this time.

April 17th.—Removed more loose bone from the opening in the cheek. The suppuration is decreased, the patient is recovering, and the sight of the eye has much improved. For a great number of red spots on the face, I prescribed a bottle of Sands' Sarsapilla; injections and emollients continued.

April 23.—The diseased parts continue to improve and the red spots on the face have entirely disappeared.

April 25th, 28th and 30th.—Removed more dead bone from the superior maxillary, and palatal bones. Usual injections, &c., continued.

May 2nd, 7th.—The health of the patient and diseased parts still improving; the latter suppurating freely. On examining the lower jaw of the left side I discovered a hard tumor directly below the first inferior molar, which was decayed and very tender and painful to pressure, I therefore extracted the tooth and the hard tumor vanished in a few days.

May 8th, 9th.—The diseased parts continue to suppurate, and on examination I found more dead bone which required to be removed, I accordingly operated with great care, and extracted a large bone, being part of the lower orbital plate, also, several pieces of the nasal plate, the os spongiosa of the right nostril, and the os unguis. The injections of Sulphate of Zinc and Tincture of Myrrh, and the emollient poultices continued.

May 10th, 12th.—I found my patient much improved, his eye-sight being much strengthened and relieved of pain, swelling quite reduced, the puncture in the alveolar is now quite free and from which there is a copious flow of pus, and the opening on the cheek has assumed a granulated appearance. For the inflammation of the eye, I prescribed a lotion of Sulphate of Zinc, Acetate of Lead, Tincture of Opium and Rose Water.

May 13th to the 18th.—The foregoing treatment was continued up to this date with decided improvement.

May 19th.—To-day I commenced injecting the sinus with diluted Port Wine, from which the patient did not experience the slightest pain. The discharge of pus is but trifling, and the secretions are rapidly assuming a normal condition. As my patient is desirous to go into the country for a few days, I prepared for him a proper astringent Lotion for the mouth and throat, and removed from his teeth the tartar which had accumulated in considerable quantity. I also directed the emollient poultices to be continued and moderate pressure with the bandage to be made over the diseased parts.

May 22d.—My patient returned home after three days absence much improved in every respect—same treatment continued.

May 26th.—On examination this morning I observed that the palate bone of the right side remained considerably swollen, and on probing the same through the alveolar puncture with a curved probe, I discovered an abscess about two inches long attached near the cribriform bone. This I at length and with much difficulty succeeded in extracting, and found it to be shaped like and resembled a cocoon, which on being opened

was found filled with puss and flocculi. I now injected the parts with the lotion of sulphate of zinc and tincture of myrrh.

May 27th to the 30th.—My patient absented himself by a visit to the country. He returned home on the 15th of June, and on examination I found all the disease entirely removed, the puncture opening in the alveolar remaining open and free from discharge.

July 1st.—To-day I gave the sinus several injections, and finding the parts perfectly recovered, I scarified the gum at the opening in the mouth, and brought the same in contact, and applied such necessities as to keep them united.

July 6th.—The incision in the gum I found entirely closed and all traces of this truly dreadful and extensive disease of the antrum maxillaria and adjacent parts are completely removed.

April 28th.—I have seen my patient several times lately, and and he still continues to enjoy perfect health, there never having been the least disposition in the disease to return.

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## QUACK DENTISTS.

BY —————.

On Monday morning, the 5th of February, '49, a stranger called on me, who represented himself as a citizen of Franklin county, Miss., who wished to purchase a small portion of *gold leaf*. I informed him that I had none, that I did not use it; at the same time suspecting that he did not know what he wanted, I made free to inquire what use he wished to make of it. He informed me that he had a job of Dentistry on hand, but that he had not gold enough to finish it, and that I would very much oblige him, &c. But I was apprehensive that a man who did not know what he wanted, would in all probability be equally at fault in using it if he had it, so I made the most plausible excuse that I could find, for not being prepared to accommodate him. I then plied him with a few plain simple questions in regard to the field of his professional labors, the extent of his practice, &c., &c.

From his replies, I gathered the information that his principal occupation was that of a Cancer Doctor, that he had a remedy that was certain death on cancer, and all kinds of scrofulous diseases, that he only practiced Dentistry a little occasionally, when he happened to find a job, and leisure from the more arduous duties of his higher profession; that he had met a man in the neighborhood who required his services in the Dental line, that he had not quite enough gold to fill his teeth, and that I would confer a favor on himself, and a blessing on his patient if I would supply his wants. But as I happened to differ in opinion with him, in regard to the latter part of that beneficent enterprise, I most cordially begged leave to decline the honor proposed, and so we parted company. Of the man or his per-

formances, farther than what I gathered from the above described interview, I have no knowledge whatever, but from his appearance and conversation, I was disposed to regard him as some aspiring genius, whose ambition prompted him to seek his own advantage at the expense of his more simple and confiding neighbors.

The next case that I propose to notice, is that of a man who passed through this village last winter with a Dentifrice, which he recommended in the most extravagant terms. I do not know what it was, otherwise than by the taste, smell, &c., but a sample that I submitted to these tests, gave the result as simple pulverized chalk, with perhaps some kind of perfume. The individual who showed me the specimen, had purchased it with the assurance that it would fasten a tooth that was just ready to drop out from absorption of the gums and processes; most of its immediate neighbors having been lost in that way already. But this patent, this almost miraculous remedy was warranted to make the loose tooth perfectly fast in the short space of twenty-four hours, and at the same time to heal up sound and well all the cavities that existed in the rest of the teeth, and all for the astonishingly low price of twenty-five cents. But after disposing of a number of bottles, the vender of this wonderful remedy was next morning no where to be found. Not one word need be said in regard to the character of one who would take such an advantage of the ignorant or afflicted. The next case to which I invite your notice, is that of a youth, the same, I presume, that was characterized in the last number of the Register as a *Steam Dentist*. I did not see him, but am credibly informed that he professes to be able to remove the nerve from an aching tooth without the least pain, (thus rendering it safe, serviceable, and comfortable for life,) after exposing it to the fumes of a pill, for a few seconds, which he prepared according to secret instructions.

When his services were called into requisition, he placed one of his pills on a common one-fourth pound store weight, heated to a moderate degree; over this he placed an inverted funnel, to the apex of which was attached a flexible tube, which conveyed the vapor into the cavity of the tooth. But his attempt on the steamboat was not the only one which proved a failure, for my informant assured me that he extirpated seven or eight nerves from one aching tooth, at as many different times, without procuring any sensible relief. I could give the name and residence, or rather the place where he "cum frum," but forbear out of regard to his relatives.

Permit me now to offer a few thoughts relative to the source or foundation of these evil practices. While some of the knowing ones might be disposed to ascribe them to the cupidity and duplicity of those who practice them, I am disposed to place them to the credit of the too generally prevalent ignorance and credulousness in reference to such matters, which serves as an occasion or influence to call into active exercise those propensities that might otherwise lie dormant in the breasts or skulls of those who are in many, if not in all cases,

both morally and mentally depraved, and thus they become the victim of circumstances, for which they are no more responsible than the vile insect that feeds on the decomposing carcase is responsible for the putrefaction that breeds him.—*Dental Register*.

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### DUBS' PATENT SCREW FORCEPS.

This invaluable instrument, which has only to be seen to be appreciated, occupies a conspicuous place in the Northern journals which treat of such matters. But its paternity seems to be questioned, and many attribute to Northern gentlemen what in truth belong to our scientific fellow-citizen, Dr. Charles H. Dubs, Dental Surgeon. It is notorious to those intimate with Dr. D. that more than sixteen months previous to securing his patent, he filed in the proper office his caveat therefor, and that for many months antecedent to that date (in 1845-6) he had this highly useful instrument in his possession, is and was its original inventor, and frequently spoke of securing a patent therefor, merely that a southerner might be heard of in the in the field of science. Proofs to this are irrefragible. Be this as it may, however, the Doctor has the Patent as *the* Inventor; and this scientific instrument, simple as it seems, is almost invaluable in the nice operations incident to the incisors and canine teeth—should be seen and used in the Operating rooms of all Dentists who aspire to perfection in the profession, and stands forth a great alleviator of human distress, the admired offspring of Southern mechanical genius. *The* periodicals may continue to publish insinuations to the contrary, but they cannot rob Dr. Dubs of the paternity of the instrument which he has secured by patent, nor of the excellent reputation which his satisfactory operations have established. They but pour oil on the fires and increase the pure flame that already so brightly burns.

A French dentist. Dr. E. Rabasse, of New Orleans, has lately purchased one of these instruments from Dr. Dubs, and extols it in the highest terms as being one of the most useful and efficient for the purposes of practical Dentistry which he ever has seen.—*Natchez Gazette*.

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### COLORING HAIR.

M. Stanislaus Julien, the learned orientalist has communicated to the French Institute the Chinese method of coloring the hair. It is said that the Chinese have succeeded in transforming, by means of medicine and a peculiar diet, the liquid which colors the pilous system, and giving to white or red hair a black tint, which maintains itself during the continued growth. The coloring is produced by means of certain substances mixed with the food and drink, which are not at all hurtful to the body, having for base and element ferruginous principles which are recommended by physicians, and always successfully employed.

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# NEW YORK DENTAL RECORDER.

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SEPTEMBER 1, 1849.

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## HULIHEN'S COMPOUND ROOT FORCEPS.

*Natchez August, 17th, 1849.*

C. C. ALLEN, M.D.

Dear Sir :

You will find enclosed the amount of one year's subscription to your valuable journal, devoted to Dental Science. Please send it to my address, city of Natchez, Miss. In subscribing, I have two objects in view,—one to profit by your editorial pen, the other to show you that I harbor not a single hard thought against the writer of certain editorial strictures on myself in your July number. Mistakes and misapprehensions will occur in all periodicals; but the noble and generous-hearted, always in pursuit of truth, will correct all errors as fast as they shall be ascertained. I have as yet never hesitated in submitting all my claims and rights to gentlemen of cultivated intellects and refined feelings, but from the base and *malicious* I ask no quarters.

Allow me, dear sir, to subscribe myself

Your obedient, with all due respect,

C. H. DUBS.

We have taken the liberty of publishing the above letter, because it contained exactly our own sentiments upon matters of this kind. As a public journalist (in a small way) we have no selfish ends to subserve, no friends to assist, and no party to support. Our only aim is "in pursuit of truth," humbly endeavoring to contribute our mite towards the improvement and elevation of the profession of our choice. If mistakes or misapprehensions occur in the Dental Recorder, as they undoubtedly do, we shall, at all times, take pleasure in correcting them as soon as they are pointed out. At the same time, we claim the privilege of expressing our own opinion upon all subjects connected with the profession of Dental Surgery, and will accord the same privilege to our contributors when exercised in reason.

We have always felt that it was of vast importance to the success and respectability of our profession, that the real inventor of every instrument or improvement used in dentistry should have the credit of it—truth and justice demand it. Now, how is this to be secured? Let each person who has invented anything new immediately communicate it to one of our dental or medical periodicals, and there it will remain imperishable proof in his favor. He at once secures all the credit which the invention entitles him to, and no person can deprive him of it, besides the gratitude of all who are benefited by the invention. How much more grateful must such an offering be to a noble

mind than the few paltry pennies or even dollars which a patent-right can add to his purse.

If Dr. Dubs had communicated his invention to the American Journal as Dr. S. P. Hulihen did, the world would have known from the north to the south, and the east to the west, that a Southerner was in the field of science. Even at this late day he is compelled to vindicate his rights through the periodicals; but let this pass. He had a perfect right to patent his invention and has chosen to take that course.

We are not sure that we exactly understand what Dr. Dubs claims as his invention. We had been led to suppose that it was only a modification of Hulihen's instrument, but from the extract which we publish from a Natchez paper, we should suppose that he claimed the invention of the instrument itself. It is a very easy matter to decide who has the priority of invention in this case if the claimants are so disposed. The June number of the American Journal of Dental Science, for 1844, contains Dr. S. P. Hulihen's description of his "Compound Root Forceps," and we have stated in our July number the time when an Eastern dentist, who had never seen Natchez nor heard of Dr. Dubs, suggested to us what he thought would be an improvement.

If Dr. Dubs will inform us what he claims as his invention and the time when it was invented, established by such proof as will satisfy the profession, we shall take pleasure in publishing it and placing the matter exactly as it should be with our readers.

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### SPRINGING OF PLATES.

A correspondent writes us that he was "*tremendously bothered*," by the springing of large plates while soldering the teeth upon them until he adopted the precaution to mix about three parts of coarse sand, such as masons mix with lime to form mortar, with one or one and a half parts of plaster. Since adopting this practice he has not been troubled. This has been our practice for years, and we have very seldom been troubled. We adopt the precaution to thoroughly anneal the plate after striking it up, and then put on a large quantity of sand and plaster, using common beach sand with just plaster enough to make it hold together.

The same correspondent uses Plaster of Paris to check profuse bleeding from the alveolus, after extracting teeth. He crowds the socket full of plaster, and holds it there by a compress of cotton placed over it.

The following plan to prevent springing of plates while soldering, has been adopted by Dr. Edward Taylor, and is published in the Dental Register of the West:

"Take an iron wire, the size of a knitting-needle, bend it double, the strands one-fourth of an inch apart; take a smaller wire, and fold

on the other back and forward, so as to make a net-work. The whole when completed, should be the length of the labial surface of the teeth, and curved to correspond with the job to be soldered. When the job is put into the plaster and sand, and we use for this a cast iron box, the net work of wire is imbedded in the plaster and sand, outside of the teeth, and between them and the border of the cast iron box. This net work of wire is filled thus with the plaster, and in heating, holds the plaster and sand together, so that the heat requisite for the process of soldering, will not crack it; an additional wire might thus be placed in the concave surface of the plate, and thus give additional security to the plate." The profession will please test this, and if they know of anything better, give it publicity."

Another correspondent writes us: "As my eye glanced over the contents of the last number, my attention was particularly arrested by the article on the "Springing of plates while soldering." I turned hastily to the page indicated, hoping to find the long desired *antidote*; but upon examining the method proposed by Mr. Sherwood, I could but pronounce it as altogether impracticable. Yet I may be mistaken." We were of the same opinion when Mr. S. first suggested his plan to us, and told him that we thought the concussion and jar of striking the plate forcibly enough to bring it back to its original form would be apt to shatter the teeth already soldered upon it; yet he assured us that he had often swedged them in this way with all the teeth on, and had never broken a single one. If this be so, we do not see why the plan may not be a good one. In cases of this kind, it is always well to try a thing before condemning it, as that which appears at first impracticable, often after a little practice, proves to be good and useful. Our correspondent uses plate about No. 26, of the common wire guage, and adopts the precaution to heat up the plate as gradually and uniformly as possible. Plates of this thickness with the above care in soldering, and an abundance of sand mixed with the plaster, forming a thick coating over the whole of the plate and teeth, we do not think can ever spring enough to do them any injury.

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*A Dictionary of Dental Science, Biography, Bibliography, and Medical Terminology.* BY CHAPIN A. HARRIS, M. D., D. D. S. Philadelphia, Lindsay & Blackiston.\*

The above work should be in the library of every practical dentist throughout the length and breadth of the land, as it is the most convenient book of reference which has ever been published. If the dentist wishes to consult the opinion of any author, or ascertain the practice recommended by different writers in any particular operation, he has only to turn to the pages of this Dictionary. Here, if he does not find the identical thing wanted, he will learn where it may be

\* This work has been several months from the press, and would have been noticed before, but owing to the negligence of the agents to whom our copy was consigned we have but just received it.

found in the shortest space of time. All the subjects connected with dental science—all the writers who have contributed anything of importance to the literature of Dental Surgery—all the instruments employed in the various operations, with the names of the inventors, and, in short, everything pertaining to any department of Surgical or Mechanical Dentistry is here elaborately arranged in alphabetical order.

The work occupies 780 pages octavo, in good type, on clear paper, and, in addition to the Dental department, contains concise definitions of most of the scientific terms belonging to medicine and the natural sciences. The medical man, as well as the dentist, will here find much useful and important information to assist him in the practice of his profession, which cannot be found in books of medicine, proper, and is not taught in any of our medical schools.

It is impossible to separate entirely the different specialities of the great science of medicine. So intimately are they connected one with the other, that in order to practice any one with success, it is necessary to know something of the principles of all the others, as they imperceptibly border upon and run into one another. The dentist who knows nothing of the principles of medicine and surgery, cannot successfully and honorably practice in the speciality of dental surgery. In his studies and inquiries in medicine, he will be greatly assisted by this Dictionary, which is another monument of the indefatigable and persevering industry of the author. Dr. Harris has contributed more to the literature of Dental Surgery than any other writer, and his opinion upon most subjects is regarded by the profession as high authority.

We notice several minor faults and omissions; but these we don't mean to say anything about to the public, but carefully note them down for the benefit of the author, should the profession ever demand a second edition. There is enough, however, in this work to warrant every physician and dentist to give it a place in his library.

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### VOLUME FOURTH OF THE DENTAL RECORDER.

The present number closes our THIRD VOLUME, and will be mailed only to those who have paid their subscriptions. Ours is a cash system, which, when faithfully carried out, saves much trouble to all parties concerned. Our thanks are rendered to those who have sustained the work thus far, and we can assure them that no trouble or pains will be spared on our part to make the Dental Recorder hereafter more acceptable to our readers than it has heretofore been. It is the object of the editor to make it a thoroughly practical work, and his intention has been that every number should contain something directly appertaining to the *practice* of Surgical or Mechanical Dentistry. We do therefore solicit practical views and descriptions from our contributors, that the subscribers may all have the advantage of comparing notes.